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ABSTRACT

The syllabus of an introductory course in linguistics intended as a foundation for studies in bilingual/bicultural education, Alaskan native languages, and anthropology is presented. The course was designed for a program for teachers of Yupik as a second language. The course objectives are to introduce students to the internal structure of language and the relationship between language and culture. Analyses of English, Yupik, and some other languages are included. The course consists of six units of readings and assignments: (1) introduction to language (linguistics and related disciplines, communication); (2) language, culture, and change (including dialects); (3) introduction to phonemes and phonetics (including the international phonetic alphabet); (4) articulatory phonetics (articulation, contoids, vocoids, stress, pitch, intonation); (5) introduction to morphemes and morphology (including some semantics); and (6) language analysis. Each unit has questions and/or activity assignments in addition to readings, and the final examination is included in the course materials for student preview. Illustrations and a glossary are included. (MSE)

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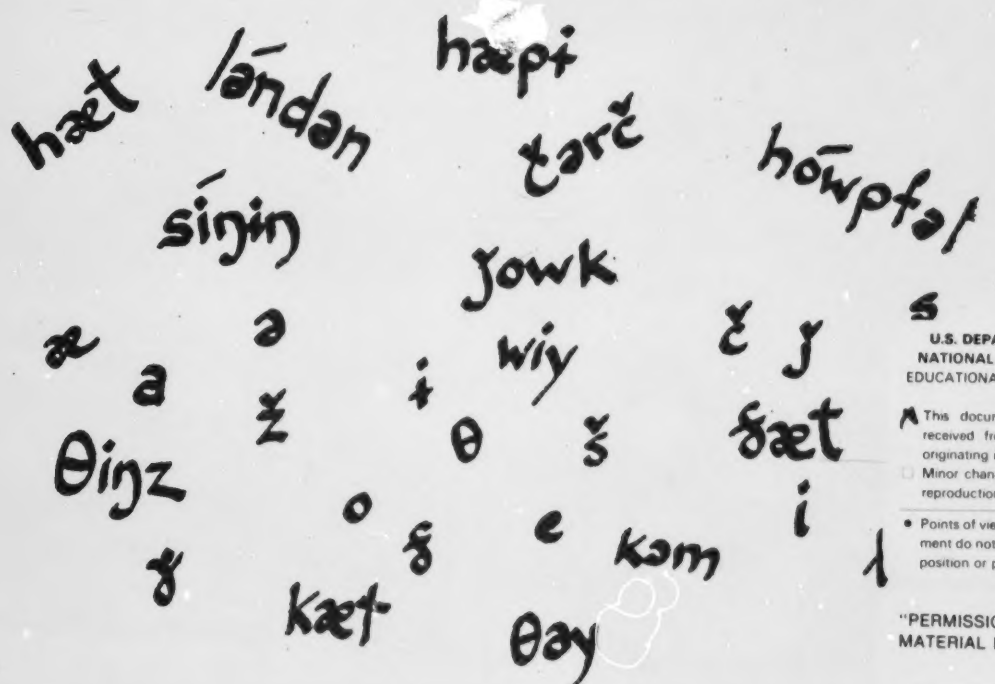
Linguistics

LING.101 INTRODUCTION TO LANGUAGE

CATHERINE COLLIER

KUSKOKWIM COMMUNITY COLLEGE



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LINGUISTICS 101 THE NATURE OF LANGUAGE

INSTRUCTOR: CATHERINE COLLIER

COURSE DESCRIPTION

A beginning course in the study of language. Systematic analysis of human language: articulation, units of sound (phonemes), units of meaning (morphemes), analysis of these elements and how they interrelate.

COURSE OBJECTIVES

Students will be introduced to the internal structure of language and the relationship between language and culture. Students will get some experience in analyzing the internal structure of English and Yupik through phonetic and morphologic patterns. Some work with other languages will also be done.

COURSE ADMINISTRATION

This is an introductory course designed to provide a foundation to studies in bilingual/bicultural education, Alaska Native languages, anthropology, other languages and linguistic analysis. Students majoring in bilingual/bicultural education, Yupik, and Anthropology should take this course early in their degree program.

This course consists of six units of readings and assignments about language and language structure. Each unit has questions and/or activity assignments to be completed in addition to the readings. There will be a final examination. The exam is included in the course materials for student preview.

The exam, questions, and activities will be graded on a percentile correct basis. The grade for this course is determined by the total precentile score achieved:

$$\frac{\text{student's total percentile points}}{\text{total possible percentile points}} = \%\ \text{grade}$$

BIBLIOGRAPHY *Required Text

* Fromkin, V. and Rodman, R., An Introduction to Language; Holt, Rinehart, & Winston

Buchanan, C.D., A Programmed Instroduction to Linguistics; D.C. Health & Co.

Gleason, H.A., An Introduction to Descriptive Linguistics; Holt, Rinehart & Winston

Laffey, J. & Shuy, R., Language Differences: Do They Interfere? International Reading Association

Landar, H., Language and Culture,; Oxford University Press

Reed, Miyaoka, et al, Yupik Eskimo Grammar; Alaska Native Language Center

Wardhaugh, R., Introduction to Linguistics; McGraw-Hill Book Co. Several passages from Wardhaugh's book are quoted at length by permission of the publisher.

COURSE OUTLINE

UNIT I INTRODUCTION TO LANGUAGE

Language and Linguistics
Linguistics and Related Disciplines
Communication

Assignments: Read Fromkin/Rodman pp. 1-13, 15-28

Questions and Exercises on pp. 28-30 of Manual

Supplemental Readings: pp. 173-188 Fromkin/Rodman

UNIT II LANGUAGE, CULTURE, & CHANGE

Language & Culture
Diversity of Language & Dialects
Language Change

Assignments: Read Fromkin/Rodman pp. 224-235, 252-258, 269-276, 191-220

Questions and Exercises on pp 54-46 of Manual

Supplemental Readings: pp. 236-246 Fromkin/Rodman
pp. 258-269 Fromkin/Rodman
pp. 33-63, 129-231 Landar

UNIT III INTRODUCTION TO PHONEMES AND PHONETICS

Phonemes
International Phonetic Alphabet
Consonants
Vowels

Assignments: Read Fromkin/Rodman pp. 30-40, 69-79

Questions and Exercises on pp. 65-67 of Manual

Transcriptions pp. 98

Supplemental Readings: pp. 79-94 Fromkin/Rodman
pp. 257-285 Gleason

UNIT IV ARTICULATORY PHONETICS

Articulation
Contoids
Vocoids
Stress Pitch, & Intonation

Assignments: Read Fomkin/Rodman pp. 40-64
Read pp. 1-17 in Yupik Eskimo Grammar

Questions and Exercises on pp. 82-84 of Manual

Transcriptions pp. 99-101

Supplemental Readings: pp. 239-256 Gleason

UNIT V INTRODUCTION TO MORPHEMES AND MORPHOLOGY

Morphemes
Morphology
Meaning

Assignments: Read Fromkin/Rodman pp. 101-131

Questions and Exercises pp. 88-90 of Manual

Transcriptions pp. 102-103 of Manual

UNIT VI LANGUAGE ANALYSIS

Analysis of Kurdish
Bontoc
Samoan
Swahili
Tepehua
Tagalog

Assignments: Project: Yupik Analysis.

Transcriptions pp. 104-106 of Manual

Supplemental Reading: pp. 136-168 Fromkin/Rodman

Glossary pp. 107-119

FINAL EXAM pp. 120-125 of Manual

UNIT I INTRODUCTION TO LANGUAGE

Have you ever wondered about your language? Why it is the way it is and how it relates to other means of communication? Language is one way in which we communicate with one another. It is the words, intonations, and other vocal means we use to communicate our feelings, thoughts, and ideas with one another. Language is made up of words (vocabulary) and how they are put together to communicate thoughts (grammar). It is a set of principles relating meanings and sound sequences. These principles enable speakers of a language to exchange ideas by means of speech sounds. Linguistic analysis is the attempt to discover and describe language structure, to clarify the patterns in the sound/meaning correlations of language.

LANGUAGE AND LINGUISTICS

Linguistics is often called the science of language. A person whose field of study is linguistics and who possesses certain specialized knowledge about language is called a linguist. A linguist may or may not speak more than one language. A linguist makes observations about language in general or about individual languages. He then classifies these observations in the form of general rules.

Linguists are in broad agreement about some of the important characteristics of human language, and one definition of language widely associated with linguistics may be used: "language is a system of arbitrary vocal symbols used for human communication". Communication can be more than language; we all use gestures and "body language" to communicate also. However, the main mode of communication that human beings use is language.

Language is systematic. Language contains two systems, a system of sounds and a system of meanings. Only certain sounds are used by speakers of any language, and only certain combinations of these sounds are possible in a particular

language. For example, we have the sounds /n/ and /g/ in English and they can be combined into "ng" as at the end of "hang". In English "ng" is never at the beginning of a word, it is only at the end of words or syllables.

All languages have dual systems of sounds and meanings. Linguists concern themselves not only with characteristics of the two systems but also with how the systems relate to each other within one overall linguistic system for a particular language.

Different languages are made up of different speech sounds. The sounds peculiar to one language differ from the sounds peculiar to other languages, with some exceptions. For example, in Yupik there is a sound written "ll" which does not exist in English, but does exist in Navajo "ł". The "r" sound in Yupik does not occur in English or Navajo. There are a large number of sounds that a person can produce and discriminate. These human sounds are virtually unlimited, but the number of sounds used by any one language is limited. No single language uses all of the speech sounds which can be produced and discriminated.

A language serves its speakers as a system of communication and is made up of a limited number of speech sounds. By sound system we mean both individual sounds of a language and the way in which these sounds are organized. Every language is a highly organized system of sounds. Every language is a unique structure of arbitrarily chosen and arbitrarily organized sounds which serve its speakers as a means of communication.

The term "arbitrary" does not mean that everything about language is unpredictable, for languages do not vary in every possible way. It means that we can not predict exactly which particular features we will find in a particular language if we are unfamiliar with that language. There is no way to predict what a word means just from hearing it, although you might make a good guess based on the actions of the person saying the word. There is no way to

predict what sounds will occur in a language, what the ratio of consonants to vowels will be or whether the nasal passages will be involved in the production of certain vowels. All of these are things that a linguist considers as he studies a language.

A linguist may list and describe speech sounds as individual units, but speech sounds always occur in combinations. Words are combinations of speech sounds. Speech sounds are arranged according to rules. For example, I already mentioned the "ng" sound and another is the sound combination "sn" which occurs in English at the beginning of words such as "snap" but never at the end such as in "pasn". This systematic arrangement of sounds is the sound system of the language.

The primary medium of all languages is sound no matter how well developed their writing systems. All the evidence we have, from the continued existence of preliterate societies, through the knowledge we have of language acquisition by children, to the existence of historical records, confirms the fact that writing is based on speaking. Writing systems are attempts to capture sounds and meanings on paper. The primary purpose of writing is to lend some kind of permanence to the spoken language and not to prescribe that spoken language in any way. In our attempts to describe a language, we must keep this fact in mind; therefore, we are not free to ignore the sounds a speaker makes in favor of studying the writing systems, nor to invent some kind of abstract system that makes no reference to sound in order to describe what we find.

We must acknowledge the centrality of speech to any study of language and therefore take an interest in phonetics and phonology. These comments should not be taken as a denial of the importance of writing and writing systems and of the possible effects of mass literacy on language systems and linguistics usage. Writing undeniably influences speaking.

An insistence on the vocal basis of language is an insistence on the importance of the historical primacy of speech over writing and therefore a denial of the common misunderstanding that speech is a spoken form of writing.

There is no connection, or at least in a few cases only a minimal connection, between the sounds that people use and the objects to which these sounds refer. Language is a symbolic system, a system in which words are associated with objects, ideas, and actions by convention so that "a rose by any other name would smell as sweet." In only a few cases is there some direct representational connection between a word and some phenomenon in the "real" world. Onomatopoeic works like "bang", "crash", and "roar" are examples from English, although the meanings of these words would not be at all obvious to speakers of either Chinese or Eskimo. More marginal are words like "soft" and "harsh" or "slither" and "slimy", in which any connection between sound and sense may well be disputed by native speakers. More than one person has claimed that English words beginning with "sl" and "sn" as in "slime", "slut", "snarl", and "snob", are used to denote a variety of unpleasant things. In much the same way the vowel sound in "twig" and "bit" is said to be associated with small things and different vowel sounds in "huge" and "moose" with large things. However, once again we are in an area of subjectivity, as counterexamples are not difficult to find, for example "sleep", "snug", "hill", and "spoon". In the circumstances, then, little evidence exists to refute the claim that languages are systems of arbitrary symbols.

The kind of communication system that interests us in linguistics is possessed only by human beings and is very different from the communication systems that other forms of life possess. Just how **different**, of course, is a question of some interest, for it can shed light on language to know in what ways human languages are different from systems of nonhuman communication.

The differences may be ascribed to the process of evolution that man has gone through and result from the genetic characteristics that distinguish man from other species. No system of animal communication makes use of the duality feature, that is, of concurrent systems of sound and meaning, and few systems of animal communication employ discrete arbitrary signals. Moreover, none allows its users to do all that language allows human beings to do: reminisce over the past, speculate about the future, tell lies at will, and devise theories. Bees do not discuss last year's supply of food, dolphins are not next-year oriented, birds do not deceive each other with their calls, and dogs do not bark about barking.

Language is used for communication. Language allows people to say things to each other and express their communicative needs. These needs are strong, whether they are the needs of a Robinson Crusoe for something or someone to address his remarks to, or of Trappist monks who devise sophisticated signal systems to avoid breaking their vows of perpetual silence. Language is the cement of society, allowing people to live, work, and play together, to tell the truth but also to tell a lie or lies. Sometimes it is used merely to keep communication channels open so that if any need arises to say something of importance a suitable channel is available. This last function is met through the convention of greeting and leave-taking, by small talk at parties, and in the chatter of secretaries in a large office. It is most conspicuous in its absence, as witnessed by the image of the tall "silent" stranger in the movies or by such a statement as "She didn't even speak to me when we passed in the street". Language also functions to communicate general attitudes toward life and others, creating what the anthropologist Bronislaw Malinowski called "a phatic communion among ... a type of speech in which ties of union are created by a mere exchange of words." We need only notice how absurd it would be to take each of the following expressions literally: "How do you do?"

"How's it going?" "What have you been up to since we last met?" and "What's happening?"

The communication of most interest to us is, of course, the communication of meaning. A language allows its speakers to talk about anything within their realm of knowledge. We must therefore take an interest in the topic of meaning, even though at times precise questions about meaning cannot easily be formulated. Later in the course we will further discuss meanings and communication in language.

Another thing to remember about any language is that it is learned. You are not born speaking your language. A newborn child does not know how to speak any language. Speech is learned. In order to communicate, a child must learn to produce the speech sounds used by other speakers of his language. The child produces a wide variety of sounds, some of which are appropriate to his language. The child hears the speech sounds used by adults around him and is encouraged in his imitation of them. When a child produces sounds not appropriate to the language he is generally ignored or corrected. The child learns that his language contains only a limited number of sounds. Even those few sounds can be combined only in certain set ways. This language learning process takes a long time. The infant is immersed in a "sea of sound" for months before making trial sounds and it takes several more months before he begins putting them together into words and short phrases. Learning your first language takes several years, but language skills learned in the first language can be applied to learning a second, third, or more languages. Young children exposed to several languages develop language skills as quickly as (and in some cases quicker than) children learning only one language. For further information about the linguistic study of language, read the following passages from Introduction to Linguistics, by R. Wardhaugh:

SOME BASIC DISTINCTIONS

Before investigating language phenomena in any detail, we should be familiar with a set of distinctions widely recognized in linguistics. These distinctions are between pairs of related terms: description and prescription; synchrony and diachrony; form and substance; and competence and performance.

Description and prescription

The description-prescription distinction relates to the fact that we must try not to make prejudicial judgments about data. A sentence such as "He ain't got none" is to be explained not criticized. Such sentences occur, and must be accounted for. They may produce undesireable consequences when uttered in certain circumstances, but this observation is a sociological one not a linguistic one. To say that "He ain't got none" is a "bad" sentence is to make some kind of prescriptive statement about behavior, not some kind of descriptive statement about a linguistic phenomenon. We would not want to call it an ungrammatical sentence. For example, we should compare it with a collection of words such as "*Got he ain't none", a collection which is definitely ungrammatical for any speaker of English. It is our task to describe the occurrence of "He ain't got none" and, if we can, to account for it in some way within a general theory. In addition, we may consider that we should also account for the nonoccurrence of the other group of words; however, not everyone would agree that this second task is a proper one. On no account, though, can we dismiss "He ain't got none" as either "incorrect" or of no interest, merely because such an expression is in low repute in certain social circles.

Synchrony and diachrony

The synchrony-diachrony distinction refers to the fact that languages exist in time and that we can study a language as it exists at any one time

or over a period of time. A synchronic statement is a statement about a language at one period in time whereas a diachronic statement is a statement about a change or changes that took place over a period of time. Synchronic statements should make no reference to previous stages in the language so that "meet" and "meat" must be said to be pronounced the same, that is, to be homonyms, in current English. It is irrelevant in a synchronic statement that they were once differently pronounced, a fact to which their spelling attests. A synchronic statement may well reflect certain historical developments: for example, in one treatment of the sounds of current English the vowels of "reel" and "real" are described as being basically different rather than alike because the second word has a derived form "reality" which contains a two-vowel pronunciation of "ea". Thus historical facts indeed show different sources for the "ee" and the "ea". However, such a similarity between the synchronic statement for current English and the diachronic evidence, that is, the historical facts, should never influence decisions as to what are the synchronic facts.

Competence and performance

The ability the reader has to understand novel sentences derives from his competence in English. This same competence causes him to reject "the ate goldfish John" as a possible English sentence, tells him that "Time flies" is ambiguous, and indicates to him that the speaker got sidetracked in the middle of such a sentence as "I was going along the street and met, well, no, it was raining at the time as I said to Peter before leaving..." Linguistic performance is full of utterances like this last one, as close listening to almost any conversation will reveal. Many linguists consider that the correct approach is not to describe such utterances, but to describe the underlying system, or competence, which leads a speaker-listener to produce and understand them.

At the same time the underlying system sould allow us to account for the ambiguity of "Time flies" and the ungrammaticality of the collection of words about John and the goldfish. Actual utterances will not, however, be ignored, but neither will they limit the scope of our inquiries. We may also consult the judgement and intuitions of native speakers about their language.

LINGUISTICS AND RELATED DISCIPLINES

Not only linguists are interested in the study of language. Anthropologists, philosophers, psychologists, and teachers of languages have long been interested in language, and linguistics has close ties with each of the other disciplines. These ties have been stronger at some times than others as interests change and as the influences of one discipline on another grows or diminishes.

Linguistics and Anthropology

The tie with anthropology is first of all a historical one in that much linguistic endeavor grew out of a necessity for understanding the languages of "primitive" peoples. Exotic languages proved to be very different in many ways from the Indo-European languages beloved of the philologists and grammarians of the nineteenth century. Linguists who wanted to describe the exotic languages of the Americas, Southeast Asia, and the Pacific found that they had to devise completely new techniques of linguistics analysis. The branch of linguistics called structural linguistics derived its characteristic descriptive approach largely from a concern for exotic languages while its approach to historical matters came largely from the discoveries of nineteenth-century philologists. Today the relationship between anthropology and linguistics is less close than in the past; languages no longer appear to vary in all sorts of unpredictable ways as we find out more about different languages and some of the ideas which intrigued early linguists, such as the relationship between language and culture, no longer generate the same kind of excitement.

Linguistics and Philosophy

If the relationship of anthropology has weakened in recent years, the one between linguistics and philosophy has strengthened during the same time. Linguists are interested once more in questions of meaning after passing through a period in which they almost totally disregarded the study of meaning. For a long time no suitable procedures seemed to exist for investigating questions of meaning; consequently, meaning in language was largely ignored because it was felt that nothing worthwhile could be said in the absence of suitable procedures. Although we can acknowlege that a language is a system for relating sounds to meanings, we encounter great difficulty in understanding how this relationship is effected. We still know very little about what is involved when we say that something "means" something. There is a new interest in some of the same questions of meaning that have long interested certain philosophers.

Linguistics and Psychology

Linguists share an interest with psychologists in the "human" properties of language, in language learning, and in "creativity." Language is uniquely human. Languages also appear to share some universal constraints. We can assume that these constraints exist because of human limitations or predispositions. Children apparently learn languages in the same way no matter how different the cultures in which they are raised. Such universal learning is of interest to both psychologists and linguists. Language is also probably the most creative system possessed by man. Psychologists and linguists, therefore, have an interest in linguistic phenomena, the former to explain behavior in general, the latter to explain linguistic behavior in particular.

Linguistics and Teaching

Finally, although languages are learned, they must also occasionally be taught, or there must be some teaching about linguistic matters. Linguists

can be expected to contribute some understanding of language to this teaching. We may also sometimes offer advice about the substance of what must be taught. Occasionally, we venture statements about how what apparently must be taught should be taught. When such statements are made with a full understanding of the complex processes of teaching and learning, they should be listened to with attention. However, too often they are not made with such an understanding, for linguists are just as prone as any other professionals to offer gratuitous advice in areas outside their realm of competence. Nor are we always completely objective in our own use of language. But such is to be expected. Language is heady stuff and not even the most self-disciplined linguist can entirely resist being influenced now and again by some of its more mysterious properties nor avoid being trapped occasionally during actual linguistic performance.

COMMUNICATION

Language is used to communicate meaning and linguists are concerned with trying to understand the systematic ways in which such communication is achieved. The specific focus is on linguistic systems; general aspects of communication are not covered beyond what is said in this section. The remarks about communication in the following pages are included mainly because of the light they throw on matters in which linguists take an interest when they discuss language rather than communication.

This section is concerned with certain aspects of two kinds of communication: nonlinguistic human communication and animal communication. Some linguists have shown an interest in nonlinguistic human communication because parts of it are apparently well structured and because it either "supports" or denies the content of linguistic communication. Animal communication is also of interest because certain systems emerge, but these systems are different

from the systems we need in describing language. As we shall see, it is difficult to explain how the gap between animal communication and human language can be bridged, or was bridged, in the evolutionary process.

Nonlinguistic Human Communication

Human beings learn to communicate with each other through nonlinguistic means as well as linguistic ones. All of us are familiar with the saying "It wasn't what he said; it was the way that he said it "when, by using the word "way", we mean something about the particular voice quality that was in evidence, or the set of a shoulder, or the obvious tension in certain muscles. A message may even be contradicted by the accompanying tone and gestures, so that each of "I'm ready", "You're beautiful", and "I don't know where he is" can mean the opposite of any literal interpretation. Often we experience difficulty in pinpointing exactly what in the communication causes the change of meaning, and any statement we make as to the source of the discrepancy between the literal meaning of the words and the total message communicated is likely to refer to something like a "glint" in a person's eye, or a "threatening" gesture, or a "provocative" manner. We are likely to make similar impressionistic statements about communication between members of different cultures. Sometimes we remark that French-men "talk with their hands," Japanese "giggle" on inappropriate occasions, and American Indians are "stone -faced." As a result, tendencies exist to stereotype people who come from other linguistic and cultural backgrounds on the basis of impressions about their language, gestures, customary movements, and uses of space.

Within a particular language or culture, sublinguistic and subcultural patterns may be even harder to describe. Certain behavior may strike us as "effeminate" in a man, "lethargic" in a young person, or "pompous" in a bureaucrat, but again we may have little real understanding of just what makes he various kinds of behavior seem effeminate, lethargic, or pompous. In each case,

though, the person has communicated something about himself, or is assumed by the observer to have done so. The interesting questions to be asked concern how a particular bit of communication has been effected, the ways in which the nonlinguistic signal are patterned and systematic, and how the patterns and systems are learned.

We could, of course, make random observations about the kinds of behavior that accompany speech. For example, we can observe that in North American culture normally only females flutter their eyelashes, although no anatomic reason prevents males from doing so. A woman may also on occasion weep in public, but a man's tears must be shed privately. Women are not supposed to indulge in the so-called belly laugh, which is reserved for males, and then only in a narrow range of cirumstances. Again only young children can throw tantrums, in public at least, since public tantrum-throwing is considered "immature" in adults. We can also observed that in certain subcultures gentlemen stand when ladies enter a room and that women may kiss each other though men may not. Such behavior is learned, communicates something about the people involved, and varies from culture to culture and within cultures.

The linguists who have looked at such behavior have done so in an attempt to discover in what ways certain characterisitcs of nonlinguistic behavior might be structured in ways resembling the structures found in language. We know from experience that some people are more responsive than others to the kinds of nonlinguistic signals just mentioned. People exhibiting this kind of ability are often said to be "sensitive", "perceptive "or "skillful at personal relationships." We would like to be able to describe the precise cues to which such people react, so that some explanation can be offered of the total communication process, not just the linguistic part of it. Although language undoubtedly plays the central role in the total process, other parts of the process must be explored if the ultimate goal is a comprehensive description of how

human beings communicate with each other. Language itself appears to be used most effectively when there is communicative congruence, that is, when words, gestures, and behavior support one another, being appropriate to the speaker and the listener and to the content and the context of the message.

Paralanguage

Those who have worked on problems of communication claim to have discovered what they call a paralinguistic system existing alongside the linguistic one. Previously language itself was described as being systematic. This further claim is that superimposed on the linguistic system is another which adds extra dimensions of meaning to utterances. The paralinguistic system is composed of various scales, and we assume that in normal communication utterances fall near the center point of each scale. Special types of communication require speakers to move up or down a particular scale or scales. Sometimes such movements occur inappropriately with consequences that are not always predictable.

Volume scale The first scale of importance is a loudness-to-softness scale. Most utterances do not draw attention to themselves on this scale, but appear to be uttered with just the right intensity of sound. However, an occasional utterance will strike us as being overloud, whereas another will appear oversoft. Likewise, some people seem to speak too loudly and others too softly. Sometimes overloudness is a necessary characteristic of certain types of communication, as when the carnival barker shouts: "Roll up! Roll up! See this beautiful young lady shot 60 feet up in the air from a cannon!" Oversoftness too may on occasion be used to invoke suspense in a story, as in"And then what do you think happened to the little girl when she got lost in the woods and that big bad wolf found her?" Sometimes, however, the degree of loudness or softness may be quite inappropriate: lovers do not normally shout at each other when they sit together holding hads; and a statesman does not normally

whisper at a press conference. We would tend to wonder about the durability of the first relationship and to suspect the motives of the whisperer. Overloudness or oversoftness can suggest to the listener that the actual meaning of an utterance is different from its literal meaning. Unfortunately, he may not always be sure of the difference and may be hard pressed to "say" why he feels one exists.

Pitch scale A second scale of interest is the pitch scale, that is, how high or how low the voice is pitched in speaking. Every speaker has a range of possible pitches available to him so that the same message can be communicated in various subranges of pitch, just as a tune can be played in various places on a piano keyboard. We also learn to associate certain ranges of pitch with certain speakers. When speakers use different ranges, we realize that something out of the ordinary is happening. Sometimes these different ranges are considered appropriate in certain circumstances, as when extrahigh pitch is used in speaking to children, as in "Now just what do you kids think you're up to?" Extrahigh pitch is usually interpreted to indicate strain or excitement, whereas extralow pitch is taken as a sign of displeasure, disappointment, or weariness.

Openness scale A third scale is one of rasping-to-openness. Rasping refers to the presence of an unusual amount of friction in an utterance, as in the Ugh! of "Ugh! Another assignment!" Openness, on the other hand, is associated with certain types of speakers, particularly political and religious orators who speak to huge crowds in large and often unenclosed spaces during some kind of ritual. Such speakers typically give their speech what may be called a "hollow" or "resounding" character, to use impressionistic terms. The speeches are also likely to make use of a variety of other devices, for example of certain kinds of metaphors: "Let us put our backs to the wall, turn our faces to

the future, stand feet firm on the gound, and resolve never to submit!"

Clipping scale A fourth scale is one of drawling-to-clipping. A drawled "Ye-a-h!" or "W-e-l-l!" can indicate insolence or reservation, whereas a clipped "Nope!" or "Certainly not!" we take to indicate sharpness or irritation. Drawling or clipping can be used to change the literal meaning of an utterance, even to give it a diametrically opposed meaning, as in a drawled "You're a real friend!"

Tempo scale The tempo of an utterance can be varied too, and the variation provide us with a fifth scale. We have all observed the smooth tempos of certain salesmen and some of us the tempo of the student with the obviously rehearsed story, as in "So I went to the Dean and I said to him that I just didn't like the course and he called Professor Smith and they discussed my problem and then I met the chairman and we talked about the college's philosophy and...." We can contrast such a tempo with a spat out: "Now - you - just - listen - to - me - I'm - having - no - more - of - this - silly - nonsense - out - of - you." These two utterances are near the opposite ends of any tempo scale.

Speakers of English must learn the uses of these various scales for knowledge of them is not inborn, the ones mentioned above being appropriate for English only. A child learning English in North America learns how to use the scales as he develops his competence in the language. He learns what is appropriate and inappropriate, and this learning happens subconsciously, just as does his learning of the grammar of the language. The fact that a child has learned the grammar of English is shown by his ability to speak English, and the fact that he has learned the paralinguistic system is shown by his ability to react to the signals of that system and to use the signals himself. Likewise, a child learns to use such expressive systems as laughing and crying

according to the requirements of his culture. He learns the amount of laughter that is considered appropriate in certain circumstances, so that he knows when a good belly laugh is allowed, when a giggle is acceptable, and when even the hint of a smile on his face is completely inappropriate. In some cultures he will learn to associate a type of giggling with embarrassment, just as in an English culture he will learn to associate giggling with childish or girlish behavior but not generally with what is regarded as mature adult behavior. The crying system must also be mastered so that a quavering voice, sobbing, emotion-filled declamations, weeping, wailing, and hysterical outbursts can be used appropriately. Even breath control makes an important difference on occasions: Mae West could breathe out a "C'mon up and see me sometime," but much breathiness in delivery would be quite inappropriate in a man.

Every time a speaker opens his mouth, he indicates one degree of involvement with the message he is attempting to communicate. If the message is delivered toward the center of each of the scales described above, the listener may give it some kind of "normal" reading. However, we still cannot easily describe how that meaning is achieved. On the other hand, if the message is not delivered toward the center of one or more of the scales described above, it will take on additional meanings to the listener, and some of these meanings may even be in conflict with each other.

In order for a listener to interpret any message he hears, he must further relate its content and delivery to such variables as the sex, age, and appearance of the speaker, and to the context of the utterance. Nevertheless, we know almost nothing about the influence of these latter variables on interpretation. Communication among human beings is an extraordinarily complicated affair, even among those who live and work closely together every day. We should not be surprised, therefore, that so many difficulties occur in communication among people from different linguistic and cultural backgrounds and that so much misunderstanding results in the world.

Kinesics

Alongside the paralinguistic system of voice modulation exists another system, a system of gestures. The study of gestures is called kinesics. The gestures may be as small as eyebrow movements, facial twitches, and changes in positioning the feet, or they may be larger gestures involving uses of the hands and shrugs of the shoulders. Again, the correct uses of gestures must be learned at the same time that linguistic usages are learned, and like linguistic usages, they vary widely among cultures and within cultures.

In North American culture we move our heads up and down to agree and sideways to diagree. Certain other cultures reverse the associations or have different devices to accompany agreement and disagreement: the Semang people thrust the head forward to express agreement, and the Ovibundu people shake a hand in front of the face with the forefinger extended to express negation. When we meet people, we greet them by nodding, shaking hands, clasping arms, kissing, or embracing. We do not greet each other by buffeting the other's head with a fist like the Copper Eskimo, or with the backslapping routine of the Spanish American, or with the embracing and mutual back-rubbing of certain Polynesian peoples. Each culture has conventional greeting routines which are quite arbitrary but perfectly natural for the group. Outside the group they may cause amusement or be completely unrecognized for what they are.

Within a culture, the appropriate uses of body parts must be learned. It is interesting to see how some of these uses relate to the differentation of behavior between the sexes. Men and women walk, sit, and stand in different ways, and only a minor part of the difference has an anatomic basis. We can observe that advertisements in fashion magazines provide useful caricatures

of some of these differences. Facial movements also differ between the sexes, particularly movements of the eyes and eyelashes: for example, the amount of closure of the eyes and the occasions for such closure and the freedom to flutter the eyelashes. Shoulder-shrugging and head-tossing styles are different between the sexes, as are the appropriate distances between the feet when standing, the positioning of the pelvis, and the characteristic curvature of the wrist. The preening behavior of the sexes is also different: hair-combing and lipstick-touching-up being characteristic of females, and tie-straightening and trouser-tugging of males. These behaviors are learned to the point of becoming habitual and often go unrecognized for what they are.

We can also compare how different parts of the body are used on different occasions, for example the uses of the feet and the legs during different kinds of sitting, standing, and walking. There are appropriate occasions for the feet and legs to be held straight and others on which they may be turned or twisted. Toes may be tapped on certain occasions for various reasons. We can observe how legs are crossed and uncrossed and how they are used in different styles of standing, walking, and running. A sentry standing on guard duty, a bride walking to the altar, and a child running home from school use their legs very differently. Such behavior is learned behavior which communicates something about the person who manifests it. In like manner, other parts of the body can be studied for their use in communication, for example the lips in greetings, pointing, and eating, and on pleasureable and distasteful occasions.

Proxemics

Still a third system involves the uses of space. Those who study proxemics, as it is called, focus on how people use the space between speakers and listeners in the process of communication. "Comfortable" distances exist for various activities, and these distances must be learned. There are appropriate distances for talking to friends, for communicating with strangers, for

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addressing superiors. Sometimes distances are deliberately manipulated, for example by superiors who try to show consideration to inferiors through deliberately "reducing" the usual distance between them. There are "correct" uses of desks and the space around them, and sometimes much time and energy is spent in worrying over appropriate table shapes and seating arrangements at conferences and dinner parties. Conventions concerning space must be observed in designing houses and offices and in planning social events. In all these activities feelings of "territoriality," that is, of rights to certain spaces emerge; however, the exact dimensions of these spaces and the uses to which they may be put must be learned afresh by each human being as part of his process of acculturation.

Any complete understanding of language use requires knowledge of the peripheral systems of human communication: paralanguage, kinesics, and proxemics. Just the language system itself must be learned—even though some of the basic characteristics of the system may be predetermined by genetic structure—so these other systems of communication must be learned. Apparently the systems are not as complex as the language system; however, they are systems that must be acquired. People must learn to walk and carry themselves in certain ways, to gesture and laugh appropriately, and even to flirt and make love according to the prevailing conventions. They must acquire control of these things while learning the language. Moreover, the two kinds of learning must be integrated. Certain psychiatrists have, therefore, taken an interest in the paralinguistic, kinesic, and proxemic systems so that they might be better able to recognize cues to abnormal behavior during interviews, such behavior being signaled by some deficiency in integration.

ANIMAL COMMUNICATION

Just as students of language need to know that other systems of human communication exist beyond the linguistic one, so they need to know something

of the systems of communication employed by other forms of life. We sometimes examine the characteristics of animal communication to try to achieve a better understanding of human language, particularly a better understanding of its unique characteristics. And, from time to time, following such an examination, the occasional linguist has even ventured into an attempt to explain what must have been involved in the genesis of human language at some distant time in the past.

A great deal of myth exists concerning communication between human beings and animals and between animals. There are stories of horses, cats, and dogs so "intelligent" that they can both understand verbal instructions and even read human minds. One area of potential interest, therefore, is interspecies communication. However, a more fruitful area is intraspecies communication, about which a considerable literture exists, covering creatures as different as bees and dolphins. For example, the latter are often credited with both "intelligence" and a sophisticated "language." Finally, several ambitious attempts have been made to teach human language to young apes raised either alongside human children or as substitutes for children.

Of some interest then are questions of the following kinds: Which animals have highly developed communication systems? What are the main characteristics of these systems, and how do these differ from the characteristics of human language? Can animals acquire language through deliberate teaching during the process of rearing? Is animal communication quantitatively different from human language, that is, is it really a smaller amount of the same kind of ability? Or is the difference qualitative, that is, of a completely different order? If it is the former, how far can the quantitative possibilities be developed in animals? If it is the latter, how did the qualitative difference arise? These questions, of course, are ordered in such a way as to require more and more speculative answers. Given the present state of our

knowledge, we must regard some of the answers as expressions of faith rather than as empirically justified conclusions.

Among the studies of intraspecies communication is that of the jackdaw by Konrad Lorenz. Lorenz noted that jackdaws have a small repertoire of distinguishable calls. One is a male courtship call, and two others relate to flying, one indicating flight away from "home" and the other flight toward "home." In addition to the calls, the birds sometimes emit a rattling sound to signal anger at the sight of a threatening object. Lorenz noted that these calls and the rattle are found in jackdaws in all parts of the world, so they may be regarded as universal characteristics of jackdaws. They are also found in jackdaws reared in isolation. Jackdaws then, appear to possess only a very limited system of genetically acquired calls enabling the birds to send but a handful of messages in contrast with the infinite number of messages that humans can send with their system.

Just as Lorenz studied life and communication among jackdaws for many years, Karl von Frisch studied the habits of bees in their natural settings. He was particularly interested in the bee dance, the dance performed by a foraging bee on its return to the hive to report information about a nectar source to the other bees. Von Frisch observed that the returning bee used a system which involved the speed of the dance and the direction of the dance in relation to the sun to inform the other bees of the distance and direction of the nectar source from the hive. According to von Frisch, all bees can use the system, for it shows only occasional minor variations among different colonies of bees.

Other investigators have examined the call systems of gibbons and dolphins. The results show that gibbons employ a small set of calls for various purposes. The calls allow gibbons to communicate certain facts about the location of food, danger, and so on, and also to keep in touch with each other as

a group works its way through dense thickets. Dolphins have a still more sophisticated call system. They use it to relate their positions to the positions of other objects, particularly to the positions of other living things. The system is not unlike certain sophisticated pieces of sounding equipment invented by man for similar purposes.

All these communication systems are much more sophisticated than the simple neighing of horses, the growling and barking of dogs, and the purring of cats. Rather surprisingly, domesticated animals rate very low in their ability to communicate with man and even with each other, the claims of owners notwithstanding. Any communication that exists between human beings and animals is almost inevitably achieved through some kind of conditioning of an animal by a human being. It is not the kind of communication that interests us, because it makes almost no use of either a code derived from human language or any kind of systematic interspecies communication. Instead, such interspecies communication employs a set of signals which are quite arbitrary and which must be devised anew for each separate relationship. The set is also extremely small and completely nonproductive. Parrots do not create novel sentences; dogs do not understand complicated commands; and even the sometimes fantastic performances of circus animals must be explained as resulting from the successful chaining of series of discrete arbitrary responses.

FEATURES OF HUMAN LANGUAGE

The linguist and anthropologist Charles Hockett has pointed out that human language has certain design features that no system of animal communication possesses. We can note how many of these features each of the systems of animal communication mentioned above possesses.

Duality

An important design feature of human language is its duality, the fact that it contains two subsystems, one of sounds and the other of meanings. In

this way language achieves a basic economy, because a discrete number of functional units of sound can be grouped and regrouped into units of meaning, and then these units of meaning grouped and regrouped into an infinite number of sentences. The permissible groupings are sometimes called tactical arrangements: phonotactic arrangements when they refer to the possible sequences of sounds, and syntactic arrangements when they refer to the possible sequences of meanings. No system of animal communication possesses duality, or even comes near to possessing it. The calls of a gibbon or of a jackdaw are discrete unitary calls, and the barks of a dog are unanalyzable wholes.

Productivity

A second feature is productivity. This feature refers to the fact that language provides opportunities for sending messages that have never been sent before and for understanding novel messages. A gibbon call system lacks productivity, for gibbons draw all their calls from a fixed repertoire which is rapidly exhausted and which disallows any possiblity of novelty. Likewise, the communication systems of most other forms of life are nonproductive. The bee dance, however, does have a limited productivity in that it can be used to communicate about nectar sources within a few miles of the hive in any direction. We should emphasize though that messages about such sources are the only kind that can be communicated through the bee dance: bees cannot communicate about people, animals, hopes, failures, and so on.

Arbitrariness

A third design feature of language is its arbitrariness. There is almost no predictability in many of its characteristics, and there is almost never any connection between symbol and object. A bee dance is iconic rather than arbitrary; that is, it rather directly represents its subject matter, because a direct connection exists between the dance itself and the source of nectar in the

number and direction of the gyrations. Any search for similar iconicity in language will reveal language to be almost entirely noniconic. For example, the English number system proceeds as follows: one, two, three, four, ... ten ... thousand, and so on, not one, one-one, one-one-one, one-one-one-one, ... and so on. Four is not four times as long as one. Of course, most call systems are arbitrary, but in this case the arbitrariness is minimal because the systems themselves are quite limited both in the number of calls available and the uses made of the calls.

Interchangeability

A fourth design feature is interchangeability. Any human being can be both a producer and a receiver of messages. The communications systems of gibbons and bees have this feature, but those of certain other animals do not: for example, some male birds possess calls which females do not have, and certain fish have similar sex-restricted types of communication. The calls and patterns are not interchangeable between the sexes.

Displacement

A fifth design feature is displacement: language can be used to refer to real or imagined matters in the past, present or future. It can even be used to talk about language itself. A gibbon's food call results from contact with food and is made in the presence of food. A gibbon never utters a call about something he ate last year, unlike some gastronomically minded human beings. Of course, bees communicate the fact that they have found nectar when they are not in the presence of that nectar, but they must do this immediately on returning to the hive. They do no dance about the nectar they discovered on some previous occasion, nor do they speculate about future discoveries. Only human beings indulge in complicated sessions of questioning and answering, and talk about talking, even to the extent of inventing

metalanguages with which to talk about language.

Specialization

A sixth design feature is specialization, which refers to the fact that communicating organisms should not have a total physical involvement in the act of communication. They should not have to stop what they are doing to make a response, nor should the response be totally determined by the stimulus. Huma beings can talk while engaged in activities totally unrelated to the subject under discussion: they can talk about strenuous pursuits without making any kind of abnormal effort. A bee in a bee dance, however, is completely involved physically in the communication process.

Cultural Transmission

A final design feature is that of cultural transmission, which refers to the fact that the details of the linguistic system must be learned anew by each speaker. They are not biologically transmitted from generation to generation. Animal systems, on the other hand, are genetically transmitted. They are completely determined by the genetic structure of the animal with even minor "dialect" differences apparently resulting from small genetic differences rather than from learning. If a particular animal does not develop its characteristic communication system, the cause is almost inevitably either pathologic or a lack of triggering; that is, it is either a genetic or maturational deficiency. Admittedly, the capacity for language in human beings has a genetic basis, but the particular language a human being learns is a cultural fact not a genetic one. On the other hand, all jackdaws, gibbons, and bees have systems which are identical to those of all other jackdaws, gibbons, and bees. All gibbons are mutually intelligible no matter where reared, whereas, of course, a Russian-speaking monolingual and an English-speaking monolingual are not.

We can conclude from the above brief survey that no system of animal communication has all the features of human language. Particularly lacking are the duality feature so central to human language and the productivity feature, which allows a human speaker the "infinite use of finite means." The symbolic nature of human language and its arbitrariness appear to be a little less important, for obviously some symbolism is involved in animal communication, and some degree of arbitrariness is present. Attempts to teach human language to animals have been characterized on the whole by failure. An almost unbridgeable gap seems to exist between man and animals in the kinds of systems that they can use. Attempts to train animals to respond to human language and to use what language items they learn meaningfully have not been successful because in each case the animal has been unable to bridge the duality gap. It has learned no more than to respond to words as the whole units and to certain combinations of words also as whole units. There is minimal productivity and absolutely no duality.

If we attempt to account for the origin of human language by maintaining that it evolved from one of the kinds of communication systems used by animals today, we must explain exactly how the feature of duality arose. The fact that animals apparently cannot learn human language even with very deliberate instruction might suggest that the difficulty is genetic in origin, so that animals lack the very capacity for language. Not even the "brightest" animal has the "intelligence" to master a human language, whereas all human beings, unless pathologically afflicted, learn to use language—and most of them accomplish this learning in the first four years of their lives to all intents and purposes! The question then becomes one of explaining a genetic change that occurred. However, we must also decide exactly which characteristics of language are genetic, and therefore universal, and which are nongenetic, and therefore learned.

Assignments:

1. For further information about language and linguistics, read pp. 1-13 and pp. 15-28 in Fromkin/Rodman An Introduction to Language.
2. Answer the questions and do the exercises on pages 29-30 of this manual.

Supplemental Reading:

For more information about animal communication read pp. 173-188 in Fromkin Rodman.

For more information about linguistics and language read pp. 1-21 in Buchanan.

For more information about language acquisition and the brain hemispheres read pp. 307-323 in Fromkin/Rodman.

UNIT I QUESTIONS AND EXERCISES

1. Describe: language
   linguistics
   grammar

2. Construct four ungrammatical sentences in English. State why you think they are ungrammatical.

3. Construct two ungrammatical sentences in Yupik (or other language). State why you think they are ungrammatical. (If you don't know a second language, use English)

4. Sounds and meanings of some words seem to be related in some way. This is not necessarily true in all systems of communication, in which the "sign" reveals the "meaning".
   A. Describe or draw five different signs which directly show what they mean. (Example: a road sign indicating an S curve)

   B. Describe any other communication system which, like language, consists of arbitrary form meaning symbols. (Example: traffic signals = red light means stop, green light means go, in the traffic signal communication system.)

5. List as many onomatopoeic English words as you can. If you can think of any Yupik ones, put them also. (For example: tengtengaaq "guitar")

6. Complete the following sentences:
   A. A person who studies the science of language is called a _____
   B. The science of language is called _____

7. True or False? _____a. Every language must be learned.

_____b. The number of sounds used in a particular language is limited.

_____c. The total number of sounds which can be produced and discriminated is unlimited.

_____D. Linguistics is the study of science.

UNIT II LANGUAGE, CULTURE, & CHANGE

Just as all humans have some kind of language system, they also all have some kind of cultural system. Culture is around and within us every day of our lives. It affects our perceptions and thoughts about the world around us and thus how we express these perceptions and thoughts through our language. It determines to a large extent our way of life and what we think about ourselves and other people. Culture cannot exist in a vacuum; it exists within human societies. Culture is a set of shared ideals, values, and standards of behaviour. You learned your culture as you grew up in your society. This learning took place through language, gestures and patterns of interaction. Language is an expression of culture and is the major way in which culture is transmitted from one generation to the next. When you teach children language, you are also teaching them culture.

It is important to remember that connection if you are a language teacher. The language and culture are integral to one another and you should not try to separate them in your lessons. Some Yupik language curricula do this by trying to teach Yupik language by translating English stories and ideas into Yupik. This can lead to confusion and miscommunication if no adjustments are made in either the content, the presentation, or language.

Culture and language are two uniquely human characteristics and affect the quality of our lives everyday. Every culture has a language which meets its specific needs. Each language is suited to the culture to which it belongs, but it may be a very inadequate instrument for expressing any other culture. An expression of preference for a given language is actually an expression of preference for the culture that uses the language. Each language seems logical and preferable to the speaker of that language because it is the best medium to express their culture. No language is more or less logical than or perferable

to any other. Some people may say "English is better than Yupik" but this is an expression of cultural preference and prejudice. Languages are neither better nor worse than one another.

Each culture develops its language to communicate its particular perception of reality. Every language provides for the expression of concepts important to the culture of its speakers. Yupik has many specific words for fish and environmental conditions that English has only very general terms for.

Anthropologists are interested in studying and constrasting the various cultures which exist in the world today. Linguists are interested in studying and contrasting the structures of the different languages. They do not (should not) make value judgements of these contrasted languages or cultures.

There is great diversity and variation in the languages used in the world. There are over 3000 different languages in use in the world. There are even numerous variations within each of these different languages.

Languages vary internally and externally in different ways. Here are some varieties of language as described by R. Wardhaugh:

By Age

Of course, other kinds of variation than dialect variation occur, and linguists have shown an interest in some of these varieties. For example, language varies according to the age of the person using it. It varies in this way because language must be learned, and there appear to be stages through which individuals progress in the process of language acquisition. However, six-year-old children seem to have gone through most of these stages. Changes do still continue to occur, but these changes are more typical of the age-grading phenomenon, than of the kinds of changes that occur during the acquisition process. We all recognize that old people speak differently from young people and that linguistic generation gaps exist. Likewise,

accepted patterns exist for communicating between and within the generations: old people to young, young to old, fathers to young children, young children to fathers, adolescents to their peers, and so on. Consequently, variation by age is one kind of linguistic phenomenon we can study and about which we can ask a variety of linguistic, psychological, and sociological questions.

By Sex and Occupation

Language also varies according to sex and occupation. The language of men differs subtly from that of women. Men do not usually use expressions such as "It's darling," and women tend not to use profanity as extensively as men. Likewise, the language used in addressing men and women varies subtly: we can compliment a man on a new necktie with the words "What a pretty tie that is!" but not with "How pretty you look today!," an expression reserved for complimenting a woman. The occupation of a person causes his language to vary, particularly in the use he makes of technical terms, that is, in the use he makes of the jargon of his vocation. Soldiers, dentists, hairdressers, mechanics, yachtsmen, and skiers all have their particular special vocabularies. Sometimes the consequence is that such persons experience difficulty in communicating with people outside the vocation on professional training, we must also note that all occupations employ some jargon, even those of the criminal underworld. There may well be a more highly developed use of jargon in occupations that require considerable education, in which words, and the concepts they express, are manipulated rather than objects, for example in the legal and teaching professions and in the world of finance.

By Function

Still another kind of variation is related to function. There are both formal and informal styles of speaking and writing. Writing also tends to be more formal than speaking in the sense that more conscious manipulation of

vocabulary and syntax takes place. The most informal styles of speaking are often unjustly condemned, for very few words used to describe slang are anything other than pejorative. Slang, with its clipped and shortened forms, its novel uses and combinations of words, and its exotic quicksilver display of language, is a universal linguistic phenomenon. Slang is easier to criticize than to study, because its very transience does not leave behind in the language the kind of evidence linguists prefer to study. Discussions of slang tend to bring out expressions of dismay and condemnation from those who misunderstand its natural function as the exuberant word play of a group often used to achieve some kind of group identity. Slang in particular and linguistic usage in general have been studied in terms of cultural associations and functional uses. Yet the educated public has shown little acceptance of the few objective statements that can be made about the varieties of usage that occur in a language like English. Good evidence of this attitude can be seen in the predominantly hostile criticism that greeted the publication of Webster's Third New International Dictionary in 1961, which had the "audacity" to describe the language as it is rather than to prescribe it as it should be. Dictionaries published after that dictionary were less stridently objective and consequently more palatable to the critics, a result that is more a commentary on the state of the art of criticism than of the art of dictionary-making.

REGIONAL VARIATION

The kind of variation that has most interested linguists is dialect variation. Such an interest results in part from the connection between modern linguistics and older philological studies in which languages were seen as continually fragmenting through dialect variation. The process led to the evolution of new languages, for example the evolution of Proto-Indo-European into Greek,

Latin, Sanskrit and so on, and then, in turn, Latin into French, Spanish, and Italian. Consequently, linguists have studied dialects in relation to their geographic distribution since they recognize that people in one location often speak a language differently from speakers somewhere else, and that speakers in a third place speak it differently again. In recent years a new dimension has been added to dialect studies partly as a result of the growth of sociology and the development of refined techniques for sampling large populations of speakers. The new dimension is that of the social variation of language in social dialects. The concern of the rest of this section is with these two aspects of language variation: regional dialect and social dialect.

A dialect itself is a variety of a language associated with a particular group of speakers and mutually intelligible with other varieties. According to this definition, Cantonese and Mandarin, both of which are often called Chinese, are different languages rather than different dialects of one language because they are not mutually intelligible in their spoken forms. However, Danish and Norwegian, sometimes called two different languages, are really dialects of one language in that they have a high degree of mutual intelligibility.

TYPES OF VARIATION

We will now consider each of phonology, grammar, and vocabulary in turn to see how American English dialects have been established and how the regional speech of one area may be said to differ from that of other areas. The differences referred to are all well known, having been pointed out in a number of studies which have been completed, for example in dialect-atlas projects or in derivative studies. Only a few differences are mentioned in each category.

Phonology

In phonology, liguists have investigated such matters as the inventory of vowels and consonants of a particular region and the phonetic values of the phonemic contracts that exist. For example, the vowels of New York City English differ from those of Austin, Texas, and each dialect has its own set of contracts and its own phonetic realizations of these contracts. In examining region al dialects we try to determine the phonetic values of the vowels in such words as "house", "tide", and "noise", that is, those vowels that are usually pronounced as diphthongs in most varieties of English but which may have very different phonetic realizations of the diphthongs. In some dialects too these words may contain monophthongs rather than diphthongs. The tense vowels of words such as "beat", "bait", and "boat" also show interesting variations from dialect to dialect. Certain constracts may be present or lacking, particularly in combination with certain phonemes, for example with /r/ or a nasal phoneme. "Mary", "merry", and "marry" may show no distinction, one distinction, or two distinctions in pronunciation. "Horse" and "hoarse" may be pronounced alike or they may be contrasted in pronunciation, as may "pin" and "pen". A dialect may also lack a distinction that most other dialects have, as when "cot" and "caught" become homophonous in some areas. The choice of vowel phoneme often varies from region to region, for example in words such as "hot", "hog", "orange", "creek", and "roof". In some areas the vowels of "house" has a very noticeably different phonetic value from that of the first vowel in "houses", and a similar difference may exist between the vowels of "wife" and "wives".

Consonantal differences are generally much less useful in establishing dialect boundaries than vowel differences. This is especially true in English. In Yupik, however, consonantal differences are important = yuk, cuk, suk (sugpiaq Alutuq). The presence or absence of postvocalic /r/ is important, however, for

"caught" and "court" can easily become homophonous. Likewise the pronunciations of the initial consonants in whip (/w/ or /hw/) and tune (/t/ or /ty/) and the mid consonant in greasy (/s/ or /z/) correlate with important dialect areas. Certain other differences can be important, as for example the choice of the initial consonant in then (/d/ or θ/), or of the final consonant or consonants in cold (/l/ or /ld/) and singing (/n/ or /ŋ/), but such differences are often less regional in distribution than they are social, a matter to which we will return later in the chapter.

Grammar

Grammatical differences among dialects are largely morphological in nature. For example, the "past tense" forms and "past participle" forms of certain verbs often have interesting variants, as in such verbs as dive (dived, dove), wake (waked, waked up, and so on), and climb (climbed, clum). The plurals of wasp and post sometimes occur as "waspes" and "postes".

Cetain phrasal forms reveal different usages that can be related to regional characteristics: "quarter (of, till, to) ten"; "names the boy (after, at, for, from) his father"; "she was sick (at, in, of, on, to) her stomach"; and "he stood (behind, back of, in back of(the door "are representative examples. In still larger syntactic units other variations appear: "he (didn't ought, hadn't ought, ought not) to do it"; "he doesn't have any, ain't got none, hasn't any)"; and "that's (yours, yourn)". Some of these last differences are possibly related more closely to level of education than they are to particular regions. Syntactic differences are apparently less tolerated than are phonological differences among educated speakers of a language; therefore, such speakers tend to eliminate them. These stigmatized differences are regarded as nonstandard by linguists, nonstandard being the nonpejorative equivalent of the more usual substandard designation.

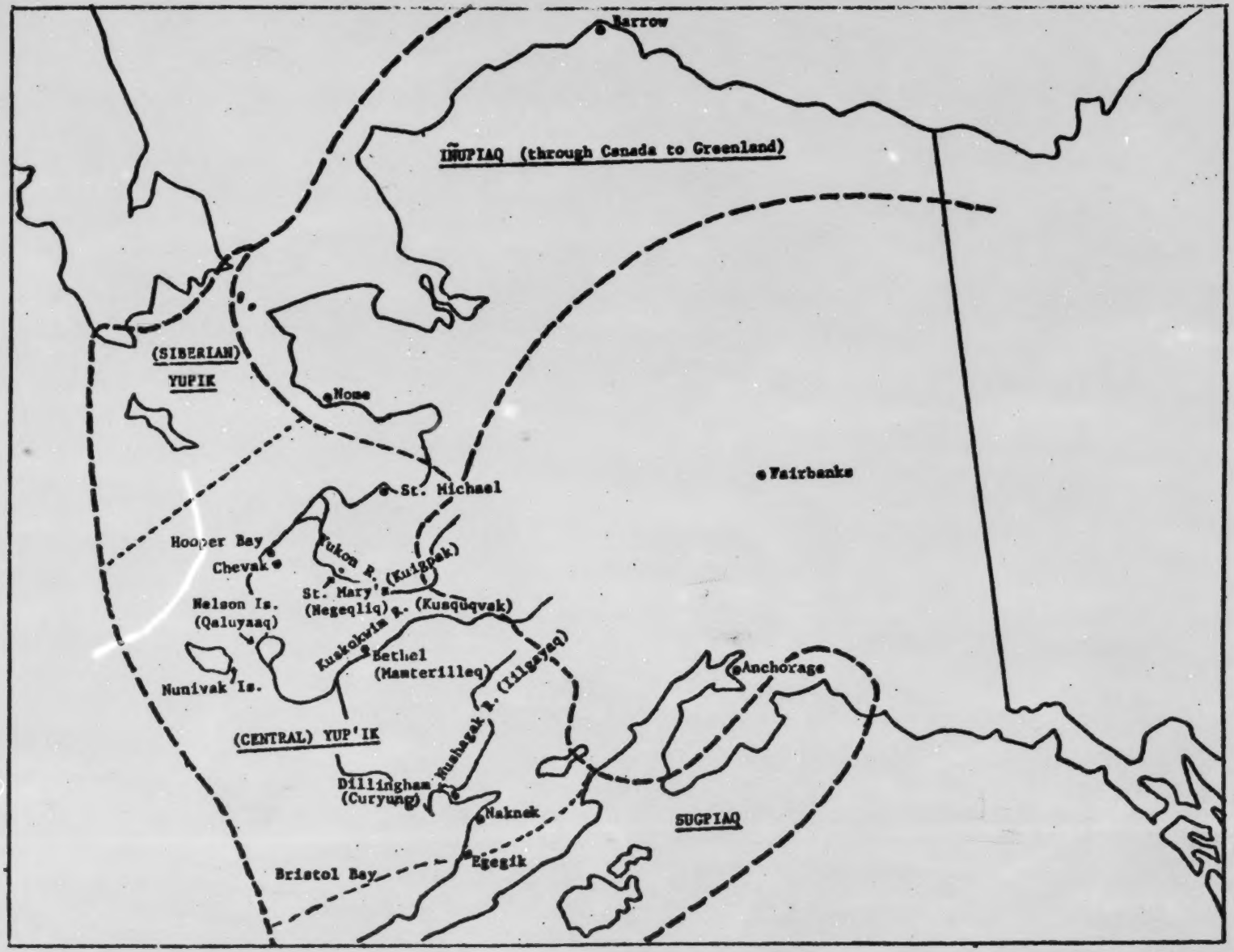
Vocabulary

Differences in vocabulary may also be observed among dialects. Such differences often relate to the commonplace activities of life rather than to what are usually regarded as scientific, cultural, and business activities, for which the vocabulary tends to be quite uniform throughout the language. The "folk" vocabulary often contains the clearest differences. There are different names for a window covering that can be rolled up: blinds, shades, window blinds, window shades, roller shades; for a web made by a spider: web, cobweb, spider's web, dust web; for the grass strip between the sidewalk and the street: boulevard, lawn extension, tree lawn, city strip; for relatives: folks, kin, kinfolks, relations, family; for a worm used in fishing: angleworm, fish bait, earthworm, fishworm; for a carbonated soft drink: pop, soda, tonic, soft drink; for a certain kind of nut: peanuts, goobers, ground nuts; and for a piece of playground equipment: teeter-totter, teeter-horse, seesaw, riding horse.

SPEECH COMMUNITIES AND DIALECTS AND IDIOLECTS

A group of people living within the same geographical boundaries and speaking the same language make up one type of speech community. However, within a larger speech community, many smaller speech communities may exist. For example, in the United States, an American-English speech community, several smaller speech communities exist: the Puerto Rican section of New York City is a Spanish speech community within the American-English speech community. This is also true of Native American languages. The Yupik speaking area of Alaska is a Yupik speech community within the larger American-English speech community of Alaska. The map on the following page shows the Eskimo speech communities of Alaska. There are also several dialects within these

within these Eskimo speech communities. The Eskimo languages are: (Central) Yupik, Inupiaq, Sugpiaq or Alutiiq, and (Siberian) Yupik. The dialects in Central Yupik are regional dialects: For example Nelson Island, Nunivak Island, Hooper Bay and Chevak, Yukon, Kuskolwim, Bristol Bay, Iliamna, etc.



This map shows the area of Alaska where Yup'ik Eskimo is spoken. The Siberian Yupik language and the Sugpiaq language are closely related to (Central) Yup'ik but are not mutually intelligible with it nor with each other. Iñupiaq Eskimo is further removed from the other three though it too shares many cognates with Yup'ik and its syntax is very close to that of Yup'ik.

Not all speakers within a speech community speak exactly alike. Some English speakers say "you all", some say "podner" (partner), and some say "Bahstan" (Boston). The parts of the United States where these are used are not called separate speech communities but dialect regions. There are many different dialects of English spoken. When a dialect is characteristic of a given region it is called a regional dialect. Dialects can be found within many speech communities, i.e. Navajo and Yupik both have several regional dialects. The speech of people in Nelson Island differs from the speech of the people at St. Marys. They all speak the same language, Yupik, but use different dialects.

All dialects share a common structure with the language of the speech community. Every language consists of a number of structurally similar dialects. A dialect of any language is sufficiently different from the standard form to be considered a separate or distinct entity, but not sufficiently different to be classified as a different language. Dialects of the same language may differ from each other in pronunciation, grammatical construction, and vocabulary, but communicaiton between speakers of the different dialects remains possible. Different dialects become different languages when a speaker of one dialect can no longer understand a speaker of another. If dialect X were isolated from contact with all other dialects of the same speech community, it would develop and change along lines of its own and eventually become a separate language. Yupik and Inupiaq used to be one language but have changed independently of one another to the point where they are separate languages. If two dialects of a language become so different that the speakers of one dialect can no longer understand the speakers of the other, they are no longer considered to be different dialects of the same language, but different languages, with different structures. The regions in which they are spoken are no longer referred to as dialect regions,

but as distinct speech communities. When two dialect regions of the same speech community become distinct speech communities, a different language is spoken in each community. The two languages no longer share a common structure.

Not only do regional dialects differ within a speech community but each member of the community represents a different way of speaking. The unique way in which an individual speaks his language is called idiolect. His idiolect will share structural features with the idiolects of the members of his speech community, and region. By observing an individual's speech habits, we can often tell his approximate age, social position, and geographical origin.

All speakers of the same language are permitted a certain range of variation but order is, however, imposed by the structure of the language. All speakers of the same language are subject to the rules of the same system. Their adherence to these rules makes communication possible. Breaking the speech rules results in a breakdown of communication. All speakers of the same language must observe the rules inherent in the structure of their language in order to communicate.

In summary, a speech community is a group of people living in the same geographical region and speaking the same language. Dialects are speech variations characteristic of different groups of people within a speech community. An idiolect is the unique way in which each individual speaks his language. Your idiolect will be different from your sisters and brothers although your dialect and language will be the same.

INTERDIALECT COMMUNICATION

A particularly interesting question to ask about dialects is how it is that speakers of different dialects of a language understand each other when numerous differences exist. One answer is that they sometimes do not, for

many people have had the experience of being hardly able to communicate with someone who was obviously speaking English, but who was speaking a very different dialect from their own. On the whole, however, easy communication is possible because all speakers use very much the same system of rules. The system varies little from dialect to dialect; indeed a dialect may be defined as one of the systems of slightly varying rules the whole set of which comprises a language. A particular dialect may have a neutralization rule for a pair of vowels in a certain environment (/i/ and /e/ before nasals), another rule for dropping certain syllables (initial unstressed syllables) or certain consonants (final stops in totally voiced or totally voiceless clusters, or postvocalic r's), and still another rule for negation (negate every word that can be negated: "He ain't never done nobody no harm"), rules that are not found in other dialects. In each case, however, the dialect is produced by the systematic application of rules and shares the vast majority of its rules with the other dialects of the language.

This systematic operation of rules in dialects can be illustrated by reference to three well-known examples of dialect variation. In one dialect the word desk is pronounced like dess, phonetically [dɛs] and its plural is desses [dɛsəz] The pronunciations of these words can be predicted from knowing that in this dialect final voiceless stops are not pronounced in voiceless cluster, and that this rule applies before plurals are added. Consequently, [dɛsk] becomes [dɛs] by a rule peculiar to this dialect, and then pluralizes to [dɛsəz] by a general English rule that adds [əz] after sibilants, as described previously. In still another dialect the vowel in wife differs in quality from that in wives, beginning in a more central position: phonetically [wəɪf] and [wɑrvz]. This characteristic results from a rule that centralizes such a diphthong before voiceless consonants, [f] in this case, but not before voiced consonants, [v] in this case.

An identical centralization is sometimes found in the pair "house" and "houses" ([haʊs] and [haʊzəz]), which involves a different diphthong.

This third example is perhaps the most interesting of all. It involves the pronunciation of the words "writer" and "rider", in which there are two potential differences, the quality of the diphthong and of the medial consonant. Often medial t's are voiced in English so that medial underlying phonemic /t/ is pronounced phonetically as [d] (or [ɾ]). In dialect A this rule operates before the rule to centralize the diphthong before voiceless consonants. Consequently, writer is pronounced as follows:

writer = /raɪtər/ → [raɪdər]

In this case the centralization rule cannot apply because there is no voiceless consonant following the diphthong. However, in dialect B the order of rules is reversed so that the rule to centralize the diphthong before voiceless consonants applies first and then the voicing rule for /t/ applies. The result is the following pronunciation:

writer = /raɪtər/ → [raɪtər] → [raɪdər]

Consequently, in dialect A "writer" is phonetically [rʌɪdər] and in dialect B it is [raɪdər]. However, in both dialects "rider" is pronounced [rɑ̄ɪdər] by still a third rule which lengthens the diphthong before the /d/ in the underlying phonemic representation of rider (/raɪdər/). Consequently, "writer" and "rider" are kept apart in both dialects: by vowel length in dialect A and by a combination of vowel quality and vowel length in dialect B.

The last dialect examples using rules and rule-ordering bring us back to the problems of what language is and how languages change. To speak a language is to have mastered a set of rules for producing sentences in that language. However, a language is not an unvarying system. All kinds of people speak it in a variety of ways and circumstances. Every child who learns a language must learn the most economical system he can from the

varieties that are present in his environment. He must compose his own rules and devise his own grammar. In large measure this grammar will be the same as everyone else's, but it will have idiosyncracies, particularly if the child is in an environment in which many different varieties of the language are spoken. It appears inevitable that in such circumstances linguistic change will occur over the generations as learners add, delete, and rearrange rules in their attempt to construct optimal grammars to suit the variations to which they are exposed.

LANGUAGE CHANGE

Languages, like other aspects of human culture, change over the course of time. What you wear today is different from what your ancestors wore, just as the way you speak and your vocabulary today are different from the way your ancestors spoke. Both written and spoken language changes overtime. Read the following passages from R. Wardhaugh about change:

The first kind of evidence that language changes is the existence of old inscriptions and manuscripts, that is, written evidence. Of course, the survival of such documentation is often accidental. Obviously no such relics can be found for nonliterate peoples. With literate peoples the survival of evidence varies according to factors such as the attitudes that prevailed toward permanent recordkeeping, the incidence of destructive wars, and the climatic conditions affecting preservation. Writing itself is a fairly recent phenomenon in man's history, dating back no more than 5,000 to 6,000 years, and alphabetic writing is even more recent. Consequently, written records are not only accidental, but also provide no more than a very shallow time depth for language history, since man probably has been capable of language for at least twenty times longer.

If we assume that any surviving writing, alphabetic or not, is systematic (for otherwise it would be ineffective), and if we know the meaning of the writing, then we should be able to say something about an older stage of the

language. Sometimes we do not know what a particular piece of writing is about or know only parts of the meaning, as in the case of the Mayan inscriptions in Mexico. If the writing is not in either a syllabic or an alphabetic system, we can say very little about the sounds of an older form of a language, but fortunately the majority of surviving documents do provide phonological evidence. Decipherable documents are invaluable in historical work, particularly documents whose provenance is known, that is, their date and place of origin. In addition, good readings of such texts are mandatory, so some specialists (paleographers) choose to work on problems of determining the provenance of texts and the best readings. The quality of the data that the historical linguist finds in documentary sources can be no better than the readings provided for these sources.

Much of the work on languages that are widely spoken in the world today has been done with the aid of historical documents, since numerous written records are available dating back several thousand years. With many languages of the world, such as Yupik however, no such documents exist to show that a language has changed or how it has changed. Consequently, other features of a language must provide the evidence for change.

We can postulate a historical relationship among different languages rather than an accidental one. An inspection of the words, cited in normal spellings, for the numbers one to ten in various languages on the chart below leads us to conclude that a historical relationship exists among these languages; an alternative explanation of extensive borrowing among the languages is much less satisfactory.

English	German	Danish	Greek	Russian	Polish
one	eins	en	heis	odin	jeden
two	zwei	to	duo	dva	dwa
three	drei	tre	treis	tri	trzy
four	vier	fire	tettares	chetyre	cztery
five	fünf	fem	pente	pyat'	pieć
six	sechs	seks	hex	shest'	sześć
seven	sieben	syv	hepta	sem'	siedem
eight	acht	otte	oktō	vosem'	osiem
nine	neun	ni	ennea	devyat'	dziewięć
ten	zehn	ti	deka	desyat'	dziesięć

Latin	Italian	French	Spanish	Persian	Sanskrit
ūnus	uno	un	uno	yek	ekas
duo	due	deux	dos	do	dvā
trēs	tre	trois	tres	se	trayas
quattuor	quattro	quatre	cuatro	char	catvāras
quīnque	cinque	cinq	cinco	panj	pañca
sex	sei	six	seis	shesh	ṣaṭ
septem	sette	sept	siete	haft	sapta
octō	otto	huit	ocho	hasht	aṣṭā
novem	nove	neuf	nueve	noh	nava
decem	dieci	dix	diez	dah	daśa

Observations of data like these prompted Sir William Jones to make the first known statement about their importance in historical linguistics. In 1786 he addressed the Royal Society of England as follows:

"The Sanskrit language, whatever be its antiquity, is of a wonderful structure; more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either, yet bearing to both of them a stronger affinity, both in the roots of verbs and in the forms of grammar, than could possibly have been produced by accident; so strong indeed, that no philologer could examine them all three, without believing them to have sprung from some common source, which, perhaps, no longer exists: There is a similar reason though not quite so forcible, for supposing that both the Gothick and the Celtick, though blended with a very different idiom, had the same origin with the Sanskrit; and the old Persian might be added to the same family, if this were the place for discussing any question concerning the antiquities of Persia."

Such evidence led Jones and others to conclude that languages do change and that similarities among languages are often not accidental. We can also see that whereas certain languages do have similarities, for example English and Sanskrit, others do not, for example English and Japanese:

Sanskrit	English	Japanese
ekas	one	hitotsu
dvā	two	futatsu
trayas	three	mittsu
catvāras	four	yottsu
pañca	five	itsutsu
ṣaṭ	six	muttsu
sapta	seven	nanatsu
aṣṭā	eight	yattsu
nava	nine	kokonotsu
daśa	ten	to

The data contained on the charts may lead us to make hypotheses about previous states of a language, about "parent" languages, that is languages from which other languages may have descended, and about the process of linguistic change. An investigator need not be daunted by the absence of written records. He can use the evidence from the speech he observes and, in investigating the languages of nonliterate peoples or peoples who have left no written records themselves, can sometimes draw on observations recorded by travelers, explorers, and missionaries.

Many interesting possibilities open up once the data are recognized, but we require basic assumptions and techniques to explore the possiblities. The most important assumption is that change is systematic, not erratic nor random. Without such an assumption reputable work is impossible. Without the additional assumption that only certain kinds of changes can occur and that these changes must be "natural," we would be free to say that anything could change to anything at any time for any reason. Although it may be so that anything can change to anything else in a language, such a change must take place over a long period of time with each individual change in the total process a "natural" one.

The change of *[man] to [meen] is an instance of vowel fronting and that of *[hūs] to [haus] is an instance of the diphthongization of a long high vowel. The falling together of the pronunciations of "clean" and "green" is an instance of vowel raising: [klēn] > [klēn] > [klin] and [grēn] > [grin]. Such processes are relatively simple because vowels do tend to move to adjacent phonetic positions (forward or back, up or down) or to diphthongize.

One interesting kind of change that affects vowels is called vowel umlaut. Vowel umlaut is a change in the quality of a vowel brought about by the presence of a front vowel or a front glide in the following syllable. The vowels in "sing" and "singe" have different historical origins. In a pre-Old English stage "sing" was *[sɪngan] but "singe" was *[sɑngjan]. The presence of the *[j] in the second syllable brought about the raising of the vowel in the first syllable: *[ɑ] > [ɪ]. Some further examples of the process of umlaut can be seen in the alternations between mouse-mice, foot-feet, and goose-geese:

Germanic	Old English	Modern English	
*mūs	mūs	maUs	"mouse"
*mūsi	mȳs	maIs	"mice"
*fōt	fōt	fUt	"foot"
*fōti	fēt	fit	"feet"
*gans	gōs	gus	"goose"
*gansi	gēs	gis	"geese"

The differences between the Modern English singular and plural forms result from the presence of a front vowel [i] in the second syllable of the orginal plural forms. Actually both umlauted and nonumlauted forms occurred for a while in certain inflections of both the singular and plural; however, the umlauted forms became identified with the plural and the nonumlauted forms with the singular.

Another kind of change can be observed in the nasalization of a vowel from an original sequence of vowel plus nasal, as in French cent [sɑ̃] from Latin [kɐntum]. Sometimes the result is two pronunciations from a single vocabulary item depending on its grammatical distribution, so that French "bon" is pronounced [bɔn], that is, with an oral vowel and a nasal, before a vowel, but [bɔ̃], that is, with a nasalized vowel, before a pause or a consonant. Occasionally, a consonant is lost and compensatory lengthening of a preceding vowel occurs. Old English "niht" [nIxt] "night" lost its fricative [x] and the vowel lengthened (and tensed), so that [nIxt] became [nīt]. Eventually the [ī] dipthongized and produced the current pronunciation [naIt]. In this case the spelling "night" still reflects the Old English pronunciation

rather well, just as do the spellings of most words ending in "ght", such as fight, bright, knight, and so on. Lengthening and shortening often work to produce interesting sets of pronunciation variants when inflectional or derivational patterns are involved or when vowels occur in different syllable types for example, in open and closed syllables or before two or more consonants. Numerous such sets exist in English, among them wise-wisdom, keep-kept, steal-stealth, clean-cleanse, Moon-Monday, and holy-holiday.

These are difficult passages to understand at this point in this course, but are included as examples of how linguists study language changes and examples of some of the kinds of changes that take place in a language. You may know of similar changes in Yupik if you have studied Yupik linguistics or grammar. There are other kinds of language changes, such as grammatical and vocabulary changes. Examples of this type of change in Yupik can be seen by the addition of certain words into Yupik after the Russians came into this region. The Yupik people "borrowed" several new vocabulary words when they "borrowed" new objects and ideas from the Russians, such as "luuskaaq" (spoon), "estuuluq" (table), sass'aq (clock), Kass'aq (cossack "whiteman"). An especially good example of change through borrowing is "tea" or "cai" "saayuq", and "caayuq" in Yupik; and "de" in Navajo. All of these words for tea come from the Chinese word "cha". As tea, which originally came from China, has spread around the world, the word for tea has spread with the substance. An interesting article about word borrowing follows page 52.

Wardhaugh has the following to say about how to account for these changes in language:

"Languages change in all kinds of way, but the ways themselves are to some extent predictable. Only certain kinds of change take place. In phonology, a feature changes, or rules are switched, or some other kind of restructuring takes place. In syntax, a certain syntactic device develops, or case endings weaken, or word order patterns change. In meaning, changes result

from language contact, from cultural developments requiring new vocabulary, and from reshaping existing meanings. But in no case does a radical change occur overnight. The processes are predictable in that only certain kinds of things happen and they happen slowly. The exact changes are not predictable, for example that a certain set of stops will lose their stop quality and become fricatives, or a particular inflection will disappear, or a particular item will stay in the language after it has been borrowed or undergone a change in meaning. Nor is the process of change itself well understood.

Many reasons for change have been advanced, but mainly by nonlinguists and persons only peripherally interested in language. The subject has been almost as fascinating as those of the creation of language and of the possibilities of intraspecies and interspecies communication. Consequently, theories of change have been advanced to fit many systems of esthetics, politics, economics, and so on.

The Current View

Most linguists who have considered the subject of change find little of value in these theories. Few of the theories really attempt to deal with linguistic issues, and those that do, for example those of least effort, economy, and substratum, are too inexact to be of much value. Linguists acknowledge that languages are not neat systems. For example, they are usually spoken in a variety of dialects
and each person usually has contact with several dialects. Language is only completely systematic in the grammars we write, and even these grammars are fragmentary works. Each person too continues to learn more about his language as he gets older, and changes in age bring about changes in usage, as certain usages become appropriate to certain ages, a phenomenon known as age-grading. Languages also have to be learned anew by every generation, and even though we might want to claim that certain kinds of principles do

not have to be learned, because they are innate, enough must be learned so that variation between generations is likely to occur.

Perhaps the clue to language change resides in that last observation. A child must learn the language of the community into which he is born. Nevertheless, that language is not a completely static fixed entity. It has many variations according to dialect, age, sex, and usage. Of course, the child is not alone in his learning task. Other children, some older and some younger, are engaged in the same task. The learners share a common characteristic, however, and that is a tendency to internalize the maximally efficient set of rules to account for the kind of language that meets with the approval of immediate peers and acquaintances, and to a lesser extent, of the general community of speakers. This maximally efficient set of rules will vary between succeeding generations. The consequence of this variation is linguistic change over a period of time; however, this change will be almost imperceptible between successive generations.

The great word bazaar

From Rotarian March 1980

Language: the international trader no tariff can stop

by Mary Helen Dohan

IN A SHOP on Shanghai's Nanking Road, the merchant asks "Hokai?" "Okay," you respond, smiling and nodding. You are comfortable with the word—exchanging common coin. It is good in Shanghai, good in Nairobi, rings as true in Lisbon as Tehran. In the Great Word Bazaar where cultures and products meet, widely recognized words are an international medium of exchange.

None of the many proposals for a universal language, hundreds over the years, has ever borne fruit. Yet all of us see our world shrinking, bringing diverse peoples willy-nilly into contact that cries for clear communication.

Can it be that language, independent as always, is making its own decision about how the gap shall be bridged? A self-appointed ambassador, it roams the world, entering where other representatives cannot go, crossing boundaries, evading guards. Sometimes, missionary-style, it adopts native dress. Arabic *goluf* is still "golf"; Italian *tegedizi* is "Take it easy" still. And along the way, language scatters a trail of words over which ideas will surely follow.

A few years ago, *machismo* and *macho* were not in the United States vocabulary. Neither was *apartheid*. Nor *guru*. How much a nation broadens its perception of other cultures by understanding their words! For, as "foreign" words spread across a land, they gradually enter the collective consciousness, provoke questions from those to whom they are new, and become small links in a lengthening chain of understanding.

Borrowing among languages has been going on since there were two tongues spoken. Why is this activity more significant today?

Principally because of its immediacy. That skilled ambassador, language, was long accustomed to slow and leisurely progress through the host country. It scattered its words at random in the courts of the learned or among the commonalty, where their source was little heeded. Now language practices shuttle diplomacy.

A rocket is launched, a satellite placed; and its linguistic fallout covers the earth. Where has the term *Skylab* not entered, with all its implications and with its U.S. connection intact? In our developing global village, the language of science approaches universality: symbols and data have no nationality, nor do terms like *DNA, RNA, quark, ohm, or betatron*. Even in less rarefied fields, wherein all of us can wander, words like the meteorologist's *tsunami* (Japanese) and *typhoon* (Chinese) are common coin.

As never before, science spills over into technology; despite nationalistic objections to such "infiltrataiya," English words like *tractor* and *silo, automation* and *tanker* have become international. Sometimes the newcomers adapt to native speech patterns, as in Japanese *rajio* or Chinese *te lu feng*, "telephone"; but the differences in pronunciation are usually no greater than regional ones within a country. In this rushing technological world, the quickest, most effective word wins. When Quebec attempted to enforce the use of French between control towers and pilots landing in that Canadian province, the pilots, accustomed to "jets" and "flaps" rather than *avions à réaction* and *volets de flaisons*, refused to land until the requirement was lifted.

English is the accepted language of European business and of multinational corporations. Business journals and economic summits bring to many countries terms that are often borrowed whole to avoid cumbersome translation. Hindi, linguists tell us, would require at least 300,000 invented words to accommodate today's technology. Clearly it is simpler to adopt and adapt, as the Japanese have done with such terms as "capital gains," *kyapitaru gein*, and as Indians themselves were doing long since. Their *dam chee*, "damn cheap," dates from the days when an earlier breed of English-speaking traders roamed the world.

Language also travels freely with immigrants. No longer do they settle in isolated enclaves and keep their language to themselves, like the U.S.A.'s early Pennsylvania Dutch. Today, Iberian-Americans and Vietnamese, Arabs and Russian Jews blend into widely dispersed host communities, and give and take of language's largesse.

The broad avenue of politics invites the flow of words. *Détente* has become as much a part of the English tongue as has the older *laissez-faire*; the once esoteric term *junta* is familiar to everyone. *Hot line* appears unchanged in French and Swedish; *SALT* now rests on Russian tongues. Many languages have adopted the useful Swedish

ombudsman because they had no other word nearly as good; and the proliferating United Nations agencies, the *WHO*'s and the *UNESCO*'s and the *UNRRA*'s, have created a lexicon universally understood.

But serious company can become boring. Language often slips away to travel with more frivolous groups—even grabs rides on fashion's coattails. With the help of the *hippies* of the 60s, it spread their name over the earth, in exchange for such exotic terms as *karma*, *swami*, and *ankh*, and ensured the worldwide adoption of *jeans*. Spelled *djinns* in India or *jïnzu* in Japan or *jeans* almost anywhere else, the word has almost caught up with *OK*.

Other words are scattered in arenas and on playing fields; *sport* itself is understood all over the world, with satellite transmissions of sporting events to beam it everywhere. In Barcelona or Madrid *aficionados* can see not only the *matadores* but players of *béisbol*, too; they can cheer for *jonrons*—which may not be spelled like "home runs" but sounds just the same. And while *schussers* (German) at Stowe (Vermont, U.S.A.) perform *slaloms* (Swedish) and gather by the fire for an *après ski* (French) drink, fans in France watch the *boxe* and shout for a *knock-oute* and Russians watch *tennisti* in Kiev. What a glorious time language will have at the Moscow Olympics this year!

TV and radio and movies bring *Im Wilden Westen* to Germany, along with terms like *cowboy* and *howdy*. *Jazz* has no boundaries at all. In return for *rocanrole*, France sent *discothèque*. Americans reduced it to *disco* and sent it all over the world as adjective, noun, and verb; and then, as lagniappe, sent *le freak* to France. *Bobu Hopu* took his show to China, where American film crews taught their Chinese counterparts terms like *zoom* and *pan* and expanded their own vocabularies beyond the traditional *chow mein* and *wok*.

Language the ambassador is a *gourmet* and enjoys international *cuisine*, especially the French. So associated are food terms with their country of origin that national prejudices are often formed according, literally, to one's taste. Italian *pastas*, Russian *borscht*, Arabic *shish kebab*, Chinese *chow mein*, English *roast beef (rosbif, rosbiffe)*—all evoke images of their creators.

Burger, that offshoot of a borrowed term (it began with *Hamburg steak*), may be the United States's most notable contribution to the gastronomical lexicon, but the indigenous *hot dog* has made an even more extraordinary journey. Jaunting merrily from Coney Island (New York, U.S.A.) to the rest of the nation, then leaping the oceans, it has landed in diverse languages—and taken off. The Japanese, for example, have split *doggu* from *hottu* as the U.S. did *burger* from *ham* and produced such wondrous combinations as *doggu pan*, "hot-dog bun" (using Portuguese *pan*, bread); *sarada doggu*, "salad in a bun;" and—surely the ultimate extension—*hambaaga doggu*.

Most linguistic chauvinists have given up trying to keep language in its place. The French, with a Gallic shrug, have muted their protests against *Franglais;* the Russians mutter less darkly against *Sovangliski*. The Japanese, Germans, and Malaysians, always hospitable to other languages, and even the new and sensitive African nations, are welcoming those foreign words that link them with the rest of the world.

As communication becomes instantaneous, and it will, acceptance of alien words, even reaching out for them, will be taken for granted. It may be only pidgin that most of us will ever achieve, but even that smattering of other tongues establishes a potential for understanding—as the clever Chinese have long known! The late Chairman Mao Tse-tung once said that a knowledge of foreign languages is, "a tool, which, if properly used, will help us to know the world." In their eagerness to give their people this tool, Chinese authorities have even pressed pedicab operators, with their street awareness of foreign terms, into service as instructors.

As citizens of every land trade in the busy global exchange, they will discover curious likenesses. On the streets of Cairo today, U.S. businessmen hear from friendly passersby the English words *welcome* and *goodbye*. These words have circled the world, perhaps, just as the useful phrase *so long* was carried through the Malay Peninsula and on to England by colonial troops a century ago.

So does language travel, scattering its words. Those who follow the trail are promised at least a fascinating journey, at best a part in forging links to patch together a broken world. ●

● *Mary Helen Dohan has published one book, "Our Own Words," and numerous articles. Married and the mother of two, she enjoys tennis, travels "as much as possible," and is now working on a book about early steamboating and a series of children's books about words.*

Assignments:

1. Read Fromkin/Rodman pp. 224-235 and 246-247 for information about the diversity of language.
2. Read Fromkin/Rodman pp. 252-258 and 269-276 for more information about dialects and language variation.
3. For more information about language change read Fromkin/Rodman pp. 191-220.
4. Answer the questions and do the exercises on pp 55-56 of this manual.

Supplemental Reading:

Fromkin/Rodman pp. 236-246 for information about the classification of world languages.

Fromkin/Rodman pp. 258-269 for information about particular dialects

For more information about culture and language read pp. 33-63, 129-231 in Landar.

UNIT II QUESTIONS AND EXERCISES

1. Define: culture
   speech community
   dialect
   idiolect
   slang

2. Here is a list of possible language universals. Which of them do you think are truly universal? Which are not? Give your reasons in each case.
   1. All languages have kinship terms (that is, words that refer to parents, siblings, inlaws, etc.)
   2. All Languages have three nasal phonemes.
   3. All Languages have idioms.
   4. All languages have a "syntactic plural" (a way of changing the form of a noun to indicate that it is plural).
   5. All Languages have pronouns.
   6. All Languages have phonological rules that delete unstressed vowels.
   7. All languages have glides in their phonemic inventory.
   8. All languages have a phonological rule that aspirates voiceless stops in word-initial position.
   9. All languages have a "syntactic past tense" (a way of changing the form of the verb to indicate that it is in the past tense).
   10. All languages have rules that determine what sounds can occur next to each other.

3. Here is how to count to five in ten languages. Six of these languages are Indo-European and four are not. Identify which are the 6 related languages.

	LG. 1	LG.2	LG. 3	LG. 4	LG. 5	LG. 6
1	en	jedyn	i	eka	ichi	echad
2	twene	dwaj	liang	dvau	ni	shnayim
3	thria	tri	san	trayas	san	shlosha
4	fiuwar	styri	ssu	catur	shi	arba s
5	fif	pjec	wu	panca	go	chamishsha

LG.	LG.	LG.	LG.
un	hana	yaw	uno
duos	tul	daw	dos
trais	set	dree	tres
quatter	net	tsaloor	cuatro
tschinch	tasot	pindze	cinco

4. We have stated that more than three thousand languages exist in the world today. State one reason why this number might grow larger and one reason why it might grow smaller. Do you think the number of languages will increase or decrease in the next one hundred years? Why?

5. Suppose someone asked you to help him compile items for a new dictionary of slang. List ten "slang" words that you use regularly and provide a dictionary definition for each.

6. Find someone who speaks a dialect of English or Yupik different from yours. See if you can list some of the systematic (regular) differences in the pronunciation of words.

7. The vocabulary of English consists of "native" words and also thousands of borrowed words. Look up the following words in a dictionary which provides the etymologies (history) of words. State the source of each of them.

1. size	5. skill	9. check	13. potato
2. royal	6. ranch	10. banana	14. muskrat
3. aquatic	7. blouse	11. keel	
4. heavenly	8. robot	12. fact	

8. List as many borrowed words in Yupik as you can think of:

UNIT III INTRODUCTION TO PHONEMES AND PHONOLOGY

As mentioned in Unit I, each language is made up of particular spoken sounds, and the particular sounds used in each language are different from one another. There are sounds in Yupik which do not occur in English and vice versa. One of the first steps in learning and teaching a new language is to learn and to teach students to hear the particular sounds of that language. These sounds may be discriminated from one another into individual unique units of sound. These units of sound are called "phonemes".

Each sound we speak can be represent by a written symbol. In written English we represent the sounds of our language by the ABC letters of the alphabet. However, linguists use their own alphabet to write or transcribe language because most languages do not have entirely phonetic alphabets. Letters do not always represent single sounds nor do particular letters always represent the same sound in each word, which can be confusing when you are trying to study a language. For example, the English alphabet represents the phoneme /s/, the sound at the beginning of "see", by either the letter "c" or the letter "s", as in the words "circus," "silly," "site," "cite." A linguist would transcribe these as /sirkes/, /siliH/ and /sayt/ for both "site" and "cite." In linguistic transcription using the International Phonetic Alphabet, there is just one and only one phonetic symbol for each speech sound. There is only one symbol for each phoneme in the IPA.

Many American linguists use a slightly modified version of the IPA. Copies of the symbols used are on the following pages. These are taken from Gleason's Descriptive Linguistics text and workbook. Look also at pp. 37-40 in Fromkin/Rodman where they compare the IPA and American symbols systems. We will use the American version of IPA. Remember to distinguish between <u>letters</u> and <u>sounds</u>. The sound /ɬ/ in Yupik is written with the letters "ll" and the sound /θ/ in English is written with the letters "th."

SYMBOLS USED

CONSONANTS

		Bilabial	Labiodental	Dental	Alveolar	Retroflex	Alveopalatal	Palatal	Velar	Uvular	Pharyngeal	Glottal
Stops	vl.	p		t̪	t	ʈ	ʧ	c	k	q		ʔ
	vd.	b		d̪	d	ɖ	ʤ	ɟ	g			
Aspirated	vl.	pʰ			tʰ				kʰ			
	vd.											
Affricated	vl.				ʦ		ʧ ʃ					
	vd.						ʤ ʒ					
Laterally affricated	vl.				ƛ							
	vd.				ʎ							
Glottalized	vl.	pʼ			tʼ				kʼ			
	vd.											
Implosive	vl.											
	vd.	ɓ										
Fricatives Slit	vl.		f	θ				ɕ	x	χ	ħ	h
	vd.	β	v	ð				ʝ	ɣ	ʁ	ʕ	ɦ
Grooved	vl.				s	ʂ	ʃ ɕ					
	vd.				z	ʐ	ʒ ʑ					
Lateral	vl.				ɬ(ɕ)							
	vd.											
Resonants Lateral	vl.											
	vd.			l̪	l							
Nasals	vl.	m̥			n̥							
	vd.	m		n̪	n	ɳ	ɲ	ŋ	ŋ	ɴ		
Median	vl.	ʍ										
	vd.	w			r		ɹ ɻ		w			
Flaps	vl.											
	vd.				ɾ							
Trills	vl.				r̥							
	vd.				r							

vl. = voiceless, vd. = voiced

A raised ʷ marks labialization. A raised ʰ marks definite lack of aspiration. A dot ̣ below marks farther back articulation. A ̼ below marks farther forward articulation. A ̥ below marks voicelessness; in some cases this mark is used to transcribe voiceless lenis sounds.

The following vowel symbols have been used in the problems:

i	a high front unrounded vowel. When there are two such, this is the higher.
ɪ	a lower high front unrounded vowel.
e	a mid front unrounded vowel. When there are two such, this is the higher.
ɛ	a lower mid front unrounded vowel.
æ	a low front unrounded vowel.
a	a central or back low unrounded vowel.
ɔ	a low back rounded vowel, or a lower mid back rounded vowel.
o	a mid back rounded vowel. When there are two such, this is the higher.
u	a high back rounded vowel. When there are two such, this is the higher.
ʊ	a lower high back rounded vowel.
ü	a high front rounded vowel.
ö	a mid front rounded vowel.
ɯ	a high back unrounded vowel.
ɨ	a high central or back unrounded vowel.
ə	a mid central or back unrounded vowel.

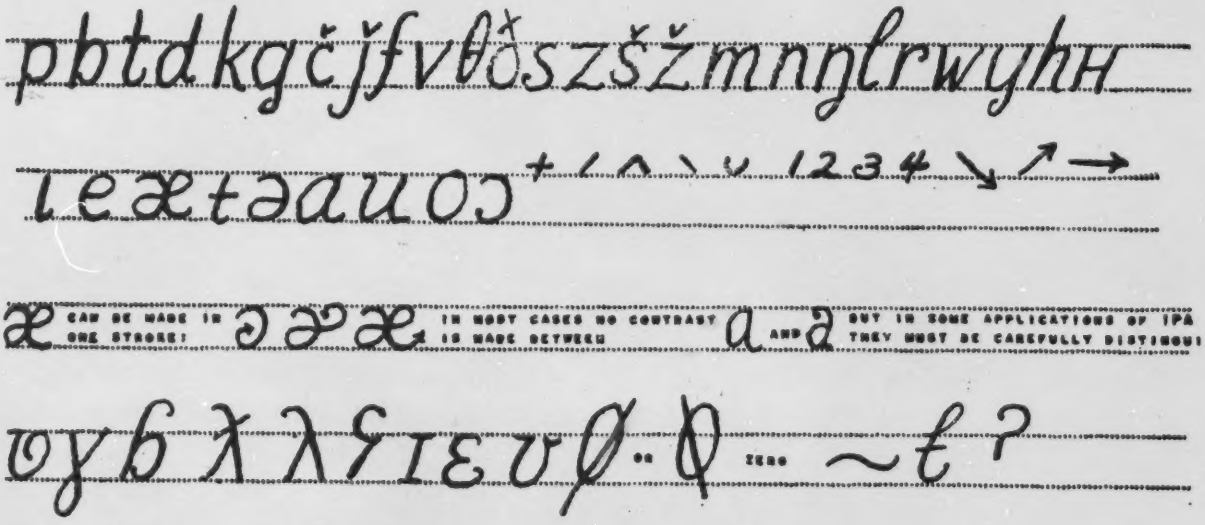
A few additional vowel symbols are explained in the problems in which they occur. The use of vowel symbols necessarily varies considerably from language to language, particularly in phonemic transcriptions, but in general they are used in such a way as to preserve their relative positions. That is, i always represents a higher vowel than e, though in some languages e may prepresent a higher vowel than English /i/. Some consonant symbols also vary in usage, but the variation is generally less.

Long vowels or long consonants are indicated by either doubling the symbol or by a raised ˙ following, e.g. either aa tt or a˙ t˙ for long a and t.

Nasal vowels are indicated by a tilde ˜ over the vowel.

Pitches are indicated either by diacritics ̀ low, ̄ mid, ́ high, ̌ rising, etc., or by numerals. Stresses are sometimes marked by the same diacritics. In general, those languages in which a diactritic appears over every vowel may be assumed to have pitch marked, those in which there is only one diactritic to a word may be assumed to have stress. In many of the problems stress and pitch are unmarked, though actually phonemic.

The following will indicate acceptable handwritten forms for the English phonemic symbols and for some others. Lines are given merely to indicate those which are higher than most, or those which descend below the line.


pbtdkgčǰfvθðszšžmnŋlrwyhʜ
ɪeæʌəaʊɔ
æ CAN BE MADE IN ONE STROKE: ɔ ɔ æ IN MOST CASES NO CONTRAST IS MADE BETWEEN a AND ɑ BUT IN SOME APPLICATIONS OF IPA THEY MUST BE CAREFULLY DISTINGUISHED.
ʍɣɓʎʎʕɪɛʊø.. ɸ ... ~ɬ ʔ

As you can see, many of the phonetic symbols are the same as the letters of the English and Yupik alphabets, but in order to have one symbol for each phoneme, some new symbols have been developed. You will be expected to learn a modified linguistic alphabet and use it in transcription. We will learn consonants first and vowels separately. When transcribing, phonemic symbols are enclosed within slanted lines /p/, /d/ and words transcribed using these symbols are also shown this way: /kæt/ "cat" /kuwskaq/ "kuskaq". (Example transcriptions are based on my own pronunciation. Each person's pronunciation may vary slightly from one another depending on their idiolect and dialect).

To be a phoneme, a sound must be phonemically different from all other sounds of the same language. That is, the sound must contrast with all other speech sounds of the same language. In the sound structure of a language, the phoneme is the smallest, or minimal unit of sound capable of making a difference in meaning.

Different sounds are phonemically different only if they contrast in the same environment. If two sounds contrast in the same environment, substitution of one sound for another will make a difference in meaning. For example, substituting /p/ for /b/ in the word "bin" makes a difference in meaning, changing "bin" to "pin." Therefore /p/ and /b/ are separate phonemes.

The linguist's first step in studying a spoken language is to determine the phonemic contrasts. We will study these contrasts by a lesson about minimal pairs. Minimal pairs are words which differ in only one phoneme, like /pin/ and /bin/ and thus illustrate that /p/ and /b/ are separate phonemes.

A native speaker of English establishes the phonemic contrasts of English with little difficulty. But to a person with a different linguistic background, the phonemic contrasts of English are not necessarily apparent. The speaker of a non-English language already possesses a set of phonemes. The phonemic contrasts in a speaker's native language do not necessarily correspond

to those of English.

A person learning English will try to pronounce the sounds of English the way he hears them. The way he hears them will depend upon his linguistic background. The speaker of a language other than English will tend to hear the phonemic contrasts of English in terms of the phonemic contrasts of his own language. For example, most Yupik speakers have difficulty discriminating /t/ and /d/, /g/ and /k/ in English. And most Enlish speakers have difficulty discrimininating /q/ and /k/ in Yupik and difficulty pronouncing "r/ɣ/", "g/ɣ/" and "ll /ɬ/" in Yupik as these sounds do not exist in English.

We will use primarily English in this course, because it is a language known by and common to both instructor and students. For your own information you may wish to develop lists of consonants and vowel sounds and minimal pairs in Yupik. This could also be used as part of your field work project which is the final assignment. Be sure to use several sources to cross-check pronunciations. I will explain more about your field work project later, but you may wish to begin 'collecting' phonemes. I will try to use as many Yupik examples as possible, but most will be in English.

CONSONANTS

Here are the phonemes for the English consonants with example words showing the sound in the initial and final position. In English /ž/ and /ŋ/ never occur initially., /h/, /w/, and /y/ never occur finally. Remember to attend to the sound not the letter. Phonemes are units of sound no matter how they are written. If you are msure of the distinction between some of these sounds, have a native speaker of English say the words carefully for you to listen to the sounds.

PHONEME	INITIAL	FINAL
/b/	bug	tub
/d/	dog	said

Phoneme	Initial	Final
	English	English
/f/	fix	tough
/g/	food	rag
/h/	hat	
/k/	cat	pack
/l/	low	real
/m/	mine	comb
/n/	net	ten
/p/	point	hop
/r/	ream	peer
/s/	sour	kiss
/t/	top	kite
/v/ vile		give
/w/	wish	
/y/	yell	
/z/	zeal	booze
/θ/	thank	bath
/ð/	that	bathe
/š/	shone	rash
/ž/		beige
/č/	chin	catch
/j/	jail	hedge
/ŋ/		song

As you can see many of these English phonemes do no occur in Yupik, There are several which occur in Yupik and not in English, such as /q/ qaneq iruq , /t/ as in "buccaller"

VOWELS VERSUS CONSONANTS

All consonant phonemes of English have a common characteristic: each is produced with obstruction somewhere in the vocal tract. Unlike the consonants, vowels are produced with a totally unobstructed oral cavity. Vowel quality depends upon the size and shape of the resonance chambers. The resonant consonants are very similar to the vowels. Both resonant consonants and vowels depend on the size and shape of the resonance chambers for their individual qualities. But while the resonant consonants are produced with a partial obstruction, vowels are produced with a totally unobstructed oral cavity. (The only consonant which is produced with a totally unobstructed oral cavity is the glottal fricative /h/ which varies according to the sound following it.)

YUP'IK SOUNDS

VOWELS	Standard Orthography	English Translation	Phonemic Representation
i as in	piuraa	("goodbye")	piuðaa
u	tuntu	("caribou, reindeer")	tuntu
ə	ena	("house")	ənа
a	acak	("aunt")	acak
CONSONANTS			
p	pitegcaun	("arrow")	pitəxcaun
t	tengsuun	("airplane")	təŋsuun
c	ca	("something, what")	ca
k	kumlaneq	("frozen fish")	kumlanəq
q	qelta	("fish scale, tree bark")	qəɮta
f	qavcin	("how many")	qafcin
w^x	wii	("I")	w^xii
$w^ɣ$	aug̑kut/awkut	("those going away")	a$w^ɣ$kut
ɮ	ella	("weather, world")	əɮa
s	uksuq	("winter")	uksuq
x	kaigtuq	("she's hungry")	kaixtuq
ɣ	itertuq	("he's entering")	itəɣtuq
v	ivruciq	("wading boot")	ivðuciq
$w^ɣ$	tau̯gaam	("but, although")	taw^{ɣ}aam
$w^ʁ$	aanau̯rluq	("poor, dear mother")	aanaw^{ʁ}luq
l	ila	("relative, part of")	ila
z	qasgiq	("community house, men's house")	qazᵛiq
ɣ	kevgaq	("messenger")	kəvɣaq
ð	iraluq	("moon")	iʁa·luq
w	cavik	("metal, knife")	cawik
y	qayaq	("kayak")	qayaq

M	ellma	("a little")	əɬMa
N	ceña	("shore")	ceNa
Ŋ	pistenguut	("they are servants")	pistəŊŋuut
m	maklak	("bearded seal")	makɬak
n	niitaa	("she hears him")	niitaa
ŋ	ungungssiq	("animal")	uŋuŋsiq

NOTE: In phonemic representations, a doubled vowel or a vowel with a raised dot after it is pronounced long. A doubled consonant is also pronounced "long"; that is, it is geminated.

Since an articulator does not come into contact with a point of articulation for the production of a vowel, vowels do not have, properly speaking, points of articulation. In the production of vowels, the breath stream has free passage through the vocal tract. Thus the manner of articulation of all vowels is the same. We will talk further about articulation in Unit IV.

VOWEL PRONUNCIATION

Two factors are responsible for the quality of English vowels:

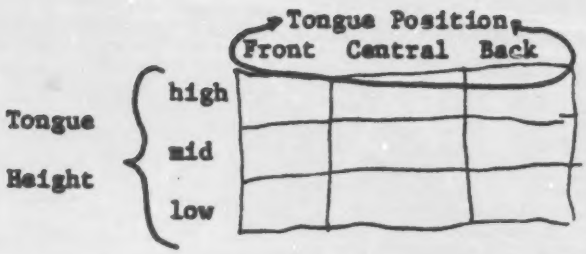
1. The height of the tongue in the oral cavity (mouth).
2. The position of the tongue with regard to front and back in the oral cavity.

For example, a high front vowel is produced with the tongue high in front of the mouth or oral cavity.

Moving from front to back or from high to low in the oral cavity, the tongue can assume numerous positions which modify the shape of the oral cavity to produce a virtually unlimited number of different vowels. Because the positions of the vowels are less precise than those of the consonants, there is great individual variation in the formation of vowels. No one language includes more than a very small number of the vowels which can be produced. But the range of individual and dialect variation in the production of vowels is great For example, the French language does not use the central tongue position. French vowels are classified as front and back—English vowels are classified as front, central and back.

Within each category, the vowel phonemes for English are further classified with regard to the relative height of the tongue in the oral cavity.

The symbols used in this vowel chart are a slight modification of the International Phonetic Alphabet. Many American linguists use this modification. A copy of the IPA vowel chart is on p. 41 of Wardhaugh. The chart on the following page uses the modified symbols we will use in this class.



	Front	Central	Back
high	i	ɨ	u
mid	e	ə	o
low	æ	a	ɔ

minimal pairs:

put:putt:pit:pat:pet:pot
/u/:ʌ/ə/ /i/ /æ/ /e/ /a/

in: /ɨ/
on: /ɑ/
pawn: /o/
pall: /ɔ/

THE SYLLABLE NUCLEUS

In the word "bit", the vowel /i/ is the peak of the syllable. A vowel is always the peak of the syllable. Syllabic stress falls on the vowel. If a syllable begins with a vowel, as in "am", the syllable peak occurs at the beginning of the syllable. If a consonant begins the syllable, as in "tan", the syllable peak occurs in the middle of the syllable.

A consonant, a consonant cluster, or a vowel may begin a syllable: "pat", "splat", "at". A syllable may both begin and end with a consonant or a consonant cluster: "bat", "blank". We will call the part of the syllable which receives stress the syllable nucleus. A syllable nucleus always contains a vowel. A single syllable nucleus contains only one phoneme, which is, of course, a vowel. A complex syllable nucleus can consist of a vowel and a following glide.

Glides (w,y,h) are a special class of consonants which enter in combination with a preceding vowel to form a complex syllable nucleus. Glides are sometimes classified as semi-consonant, sometimes as semi-vowels. They share characteristics of both consonants and vowels. Phonetically, glides have vocalic characteristics; they are produced very like vowels. The function

of any speech sound is determined by its distribution. Speech sounds are classified as consonants or vowels on the basis of two criteria: production and distribution. Production is related to phonetics, distribution to phonemics.

If a sound is distributed like a consonant it functions like a consonant. Glides are distributed like consonants. Thus we say that their function is consonantal and phonemically we classify them as consonants.

In English, a stressed vowel must be followed by a consonant or by a glide. The "long" vowel sound that speakers of English think of as a single vowel is often a combination of two vowel-like sounds (a vowel plus a glide). Such combinations make up the complex syllable nuclei of English. Speakers of English use approximately the same set of vowel phonemes, which are distributed differently in different dialects. You may have already noticed some discrepancies between your idiolect and the examples which we have written phonemically.

When a glide precedes a vowel , its function is purely consonantal, but when it follows a vowel, a glide becomes a part of a complex syllable nucleus. In a complex syllable nucleus, the glide is closely related to the vowel. A vowel and following glide are thought of as a unit.

ASSIGNMENTS:

1. Read Fromkin/Rodman pp. 30-40, pp. 69-79 for more discussion of phonemes and the International Phonetic Alphabet
2. Answer Questions and Exercises on pp. 65a-67 of manual.
3. Do four of the paragraphs on the Reading Practice on p.98 of the Manual. Put your interpretations on the back of your questions pages when you hand them in.

SUPPLEMENTAL READINGS:

1. For more on phonology, read pp. 79-94 in Fromkin/Rodman
2. Gleason pp. 14-37 for more on vowels and consonants in English.

UNIT III QUESTIONS AND EXERCISES

1. Give two words for each phoneme represented, one with the phoneme in in the initial, one in the final position.

/b/ _____ _____

/d/ _____ _____

/f/ _____ _____

/g/ _____ _____

/h/ _____ _____

/k/ _____ _____

/l/ _____ _____

/m/ _____ _____

/n/ _____ _____

/p/ _____ _____

/r/ _____ _____

/s/ _____ _____

/t/ _____ _____

/w/ _____ _____

/y/ _____ _____

/z/ _____ _____

/θ/ _____ _____

/ð/ _____ _____

/č/ _____ _____

/ǰ/ _____ _____

/ŋ/ _____ _____

/ž/ _____ _____

/š/ _____ _____

2. Minimal pairs are words that differ in only one phoneme. For each of the following pairs of English consonant phonemes, find two minimal pairs. One pair should show contrast in initial position and one in final, wherever this is possible. For example: /p:b/ paste: baste, rope: robe /č:ǰ / chin: gin, etch: edge /z:ð / zen: then, close: clothe

/p:b/

/t:d/

/d:g/

/f:v/

/s:z/

/m:n/

/n:ŋ/

/r:l/

/w:y/

/p:f/

/b:v/

/t:θ/

/d:ð/

/ð:ð/

/č:ǰ/

/s:š/

/s:θ/

/z:ž/

/l:n/

/y:l/

3. Check each pair of words that are minimal pairs:
(Example: hit:hid is a mininal pair, thing:this is not a minimal pair (it differs in "th" /θ/ and "th" /ð/ and in "ng" /ŋ/ and "s" /s/)

a. pill:bill
b. mink:sink
c. peek:feet
d. tan:pan
e. mean:feat
f. shin:sink
g. hatch:hack
h. sex:set
i. catch:ketch
j. seige:beige
k. mate: made
l. dutch:touch

4. Give the phoneme symbol for the initial sound of each of the following words (Example: ð this)

a. fan	h. goat
b. van	i. thin
c. cat	j. then
d. circus	k. tide
e. shine	l. died
f. George	m. thought
g. jump	n. church

5. English-speaking people differ as to how many and which of the 36 possible syllable nuclei they use in speech. If you are to transcribe accurately, you will need to ascertain which ones you commonly use. It will also be helpfu to have a list of key words. Prepare such a list based on your own pronunciation. Examples are given based on my own pronunciation--yours may vary slightly.

pit /i/_____ meet /iy/_____ really /ɨH/_____
met /e/_____ may /ey/_____ egg /eH/_____
hat /æ/_____ pass /æH/_____ moth /aH_____
kin /ɨ/_____ hill /ɨH/_____ cow /aw/_____
hut /ə/_____ kite /ay/_____ could /uH/_____
hot /a/_____ shoe /uw/_____ awed /ɔH/_____
look /u/_____ boy /oy/ _____
odd /o/_____ calm /oH/_ _____
call /ɔ/_____ hoe /ow/ _____

6. You can also make minimal pairs for vowels sounds. Try some for these basic phonemes:

Examples: /i:e/ win: when	/æ:a/ hat:hot	/ow:uw/ show:shoe
/i:e/	/i:ə /	/ow:uw/
/e:ə/	/iy:ey/	/a:u/
/æ:e/	/ey:ay/	/u:i/
/æ:a/	/aw:ow/	/a:o/

UNIT IV ARTICULATORY PHONETICS

There are two branches of the study of phonetics: articulatory and acoustic. Acoustic phonetics deals with the perception of speech sounds. Articulatory phonetics deals primarily with the production of speech sounds. We will concentrate on the production and formation of speech sounds, articulatory phonetics. Here are charts showing the points of articulation which produce English and Yupik sounds.

ARTICULATION

	Lower Articulator	Upper Articulator
Bilabial	(lower) lip	(upper) lip
Labiodental	(lower) lip	(upper) teeth
Dental	tip of tongue	(upper) teeth
Alveolar	tip of tongue	(upper) gums
Alveopalatal	front of tongue	far front of palate
Velar	back of tongue	velum (soft palate)
Glottal	The two vocal cords	velum (soft palate)

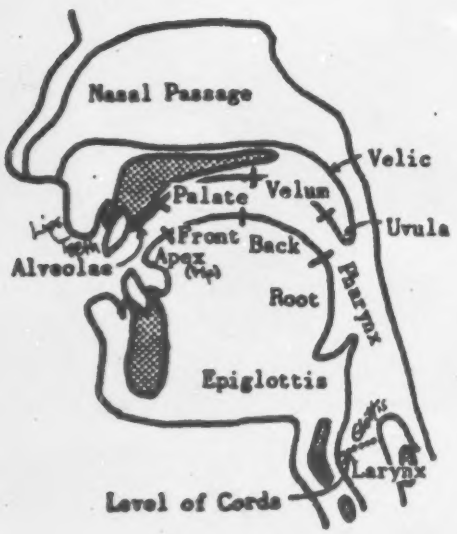


Figure 1

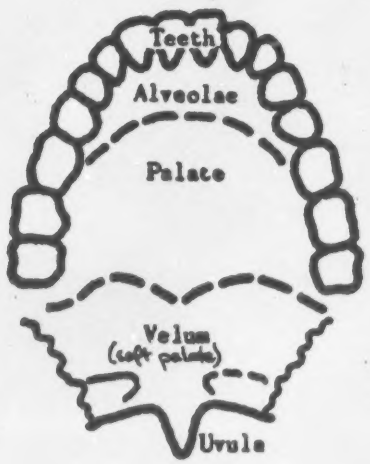


Figure 2

YUPIK PHONEMES & ARTICULATION
by Miyaoka

Table 1: Vowels.

	front	central	back	
high	i		u	voiced
mid		ə		
low		a		
lengthening: raised dot (·)				

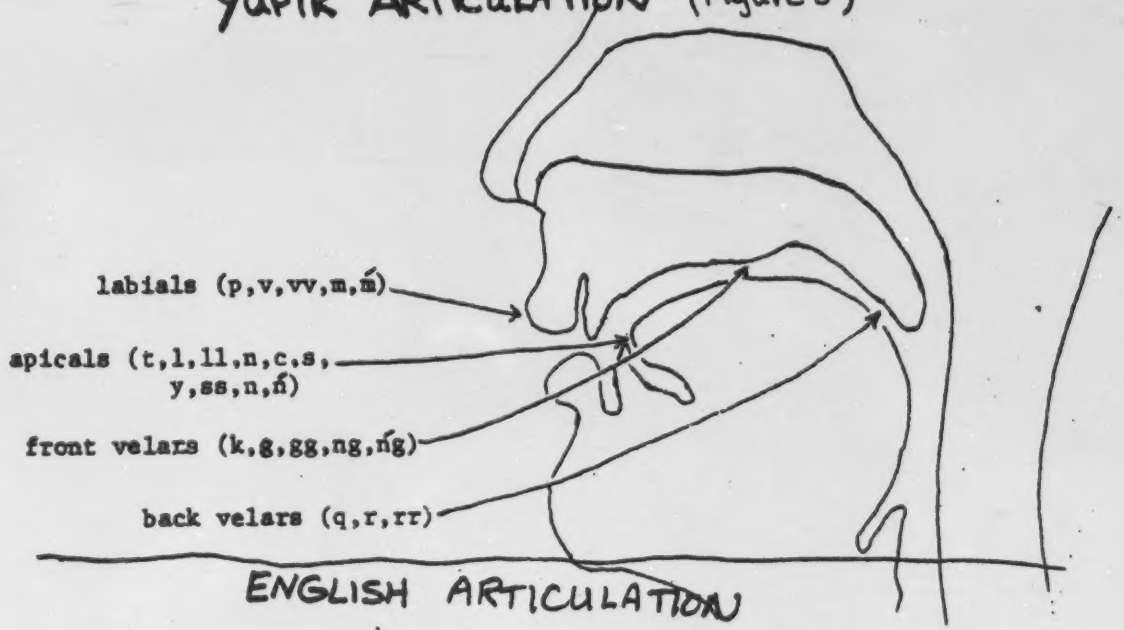
Table 2: Consonants (phonological).

	labial	apical		velar		
		dental	alveo-palatal	front	back	
stop	p	t	c	k	q	voiceless
spirant	f	ɬ	s	x	χ	
	v	l	z	ɣ	ʁ	voiced
glide	w		y			
nasal	m	n		ŋ		
gemination: apostrophe (')						

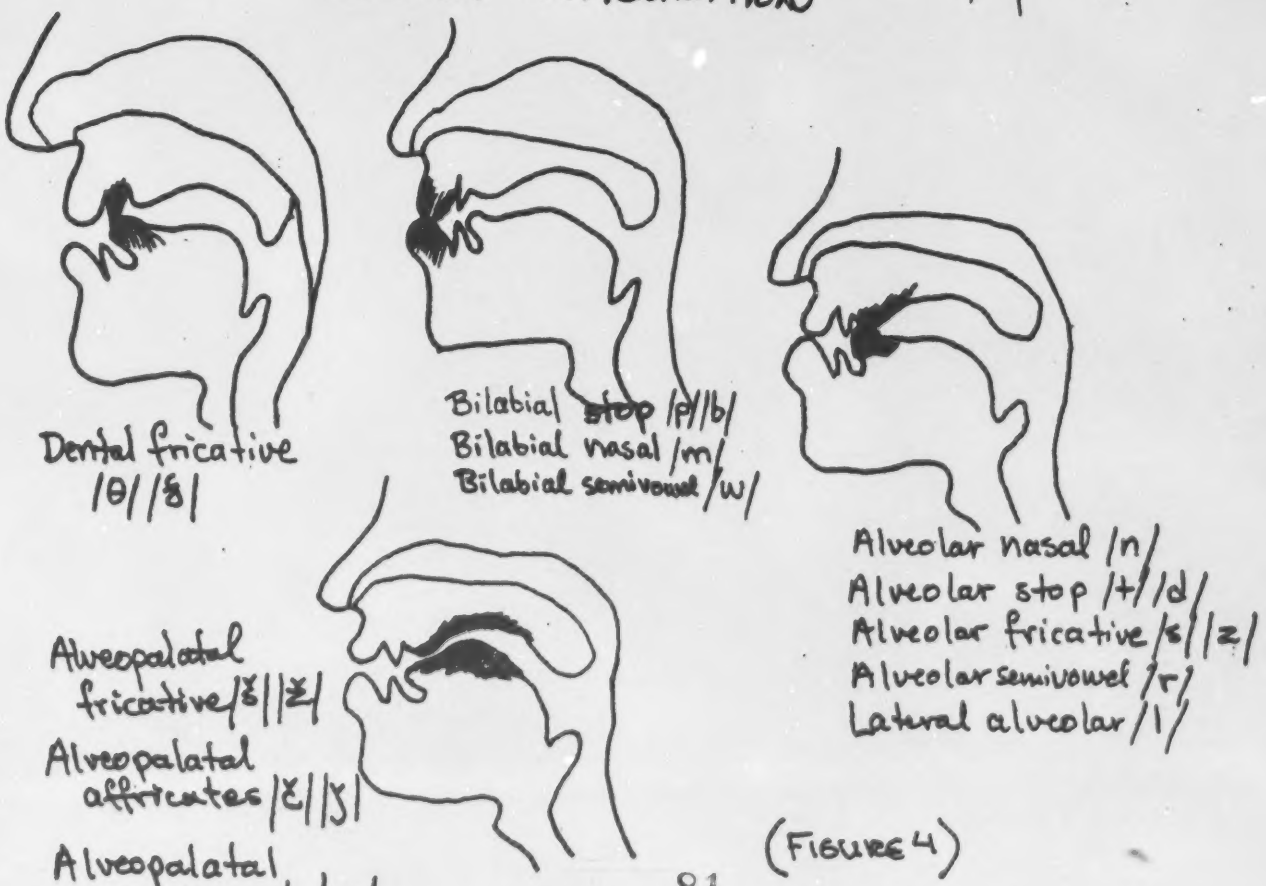
Table 3: Consonants (phonemic).

	labial		apical		velar		
		velarized	dental	alveo-palatal	front	back	
stop	p		t	c	k	q	voiceless
spirant	f	w^x w^x	ɬ	s	x	χ	
	v	$w^ɣ$ $w^ʁ$	l	z	ɣ	ʁ	voiced
glide	w			y			
nasal	M		N		ɴ		voiceless
	m		n		ŋ		voiced
gemination: doubling of the consonant							

YUPIK ARTICULATION (Figure 3)

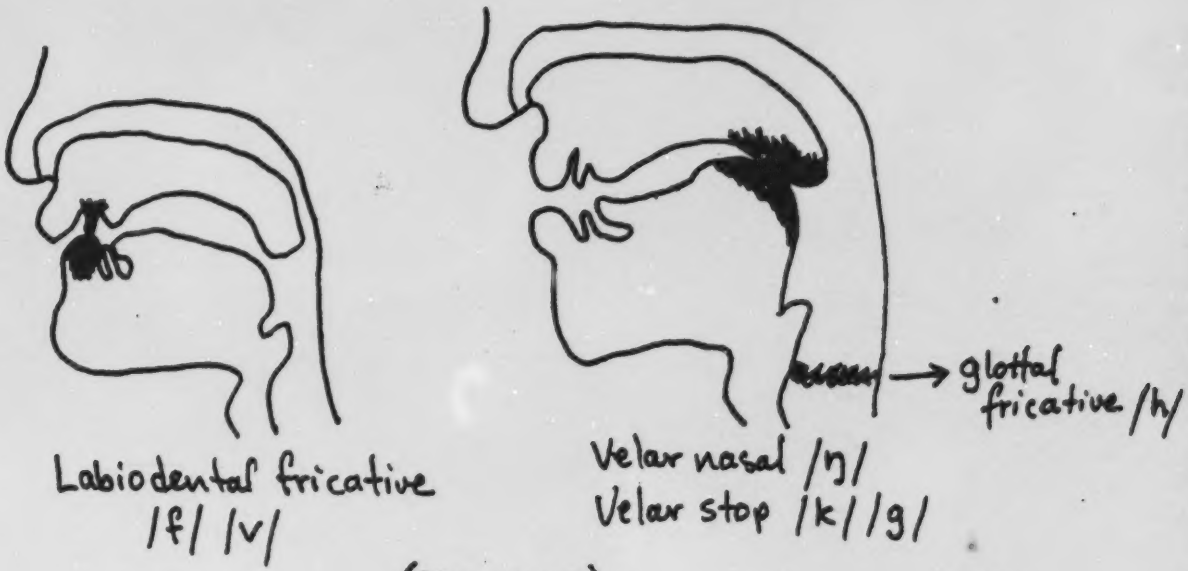


ENGLISH ARTICULATION



(FIGURE 4)

More English Articulations



(Figure 5)

Figure 1 indicates those parts of the articulatory apparatus that are of greatest interest to us. An examination of the figure suggests that the areas below the larynx, particularly the lungs, are of no great concern. The lungs are obviously important in speaking, since they provide the airflow to support speech, but they seem to have no function in articulation. A possibility does exist that the lungs are used differently in speaking different languages. Attempts have been made to relate the different syllable structures of languages to different kinds of muscular control in the chest in order to establish relationships between syllables and chest pulses. However, the postulated relationships are very controversial.

The articulatory apparatus in Figure 1 contains three important areas or cavities: the pharyngeal cavity (throat); the oral cavity (mouth); and the nasal cavity (nose). The airstream coming from the lungs may be modified in these cavities in a variety of ways. It may also be modified in the larynx or "voicebox" before it reaches any of the cavities. Such modification results from some kind of interference with the movement of the airstream. This modification can be achieved by completely interrupting the airstream or by partial interference in one or more ways. The principal source of such modification is the tongue, and the word language itself derives from the Latin word lingua meaning "tongue."

Larynx

In any detailed description of the apparatus shown in Figure 1 we usually proceed through the whole vocal tract from the "south" to the "north", that is, from the larynx to the lips. The larynx is a bony boxlike structure in the front of the throat which contains a valvelike opening consisting of two membranous tissues, the vocal cords. The airstream proceeds to and from the lungs through this opening, called the glottis. Normally, only egressive air, that is, air being released from the lungs, is used in producing speech, but sometimes ingressive air, that is, air going to the lungs, may also be used. The membranous tissues can be used to close off the opening in the larynx, just as a valve can be closed. The glottal passage is closed, for example, in lifting heavy objects in order to stabilize air pressure in the chest. In certain pronunciations of "bottle" the middle consonant "t" is pronounced simply by making a brief glottal closure, called a glottal stop, rather than, as with the "t" in "top," by placing the tip of the tongue behind the upper teeth. The symbol for a glottal stop is [ʔ], and it is enclosed within square brackets to show that it is a phonetic symbol. The middle consonant of "bottle", then, may be pronounced exactly like most pronunciations of the initial part of "ouch", that is, the part that precedes the vowel, the "gruntlike" sound at the very beginning. More usually in speaking, the tissues, or vocal cords, are either open and vibrating or open and not vibrating. In the first case the vibrations establish a condition called voicing, noticeable in the initial sounds of "bin", "vat", and "this"; in the second case the condition is called voicelessness, noticeable in the initial sounds of "pin", "fat", and "think". A third kind of opening results in whisper.

Pharyngeal Cavity

In the pharyngeal cavity the epiglottis serves as a protective cover for

the larynx so that food does not "go down the wrong way." It serves no purpose in the production of speech. The pharyngeal cavity may be used as a whole or various parts can be used. The total size can be altered so that its use as a resonating chamber for the sounds produced by vibrations of the vocal cords may vary considerably, either in different languages or in different styles of speaking within a single language. The pharyngeal cavity can also be modified to produce complete stoppages in the airstream or partial stoppages resulting in local friction. However, speakers of English do not use the pharyngeal cavity in this way.

Oral Cavity

The greatest source of modifications of the airstream is the oral cavity. The modifications result from movements of the uvula, lower lip, and tongue. The uvula is limited in its function in that it can only be made to vibrate to produce a uvular "r" [R], a sound found in Yupik but not in English. The lower lip can be moved to meet the upper lip, as at the beginning of "bin" [b], or the upper teeth, as at the beginning of "fat" [f]. The tongue is much more flexible in its uses than either the uvula or the lower lip. All parts of the tongue can be moved: the back of the tongue can be raised to meet the top of the mouth, as at the beginning of "cat" [k]; the forward part of the tongue can be raised too, as at the beginning of "ship" [s]; the tip of tongue can be thrust between the teeth, as at the beginning of thin [θ]; and the tongue may even be thrust out to the lips and beyond, so as to protrude from the mouth. In addition, the tongue can be trilled, curled, and turned back (or retroflexed). The tongue is the articulator par excellence and, for the purposes of describing most sounds made in the oral cavity, we need to refer only to certain parts of the tongue (the back, center, front, and tip) acting in combination with certain parts of the mouth (soft palate, the hard

palate, and alveolar ridge). The teeth, both upper and lower, and the lips make up the rest of the apparatus we need to refer to in order to describe how sounds are produced in the mouth.

Nasal Cavity

The nasal cavity is easier to describe than the previous two cavities. It is connected to the oral cavity by way of the velic at the back of the mouth. The soft part of the roof of the mouth, the velum, can be drawn back to close the velic so that all air exiting from the lungs must proceed through the nose. Generally, the velic is either definitely open or definitely closed, although in some styles of speaking or in some dialects partial opening may be observed, the result being speech with a nasal coloring or "twang." No possibility exists for any further modification once air is in the nasal cavity, for there are no parts of that cavity which can be used to produce a stoppage or create friction. There is perhaps one exception. When a speaker has a severe head cold, his nasal passages become unserviceable for speech. Nonnasal sounds, like the beginning sounds of "bat" [b] and "doze" [d], are not affected, but nasal sounds, like the beginning sounds of "mat" [m] and "nose" [n], are impossible: the nasals are realized like the nonnasals made with the same articulations so that "mat" sounds like "bat" and "nose" like "doze". A speaker with a very bad head cold is never "nasal," except in popular parlance: he is, in fact, quite the opposite—completely nonnasal.

Before introducing more detail we should point out that the articulatory apparatus discussed above does not have speech as its primary function. The apparatus exists primarily for breathing and eating: it does not exist for speaking. Speech is an "overlaid function" so that the "speech organs" basically exist to serve other purposes. In most respects the anatomic features of other primates" mouths resemble those of human beings, but other primates do not speak. Language is almost certainly therefore a mental phenomenon in that it does

not seem to depend exclusively on the development of certain physical organs.

The articulatory apparatus shown in Figure 1 is used in a variety of ways. Phoneticians and linguists try to describe certain distinctive activities of the apparatus which seem to recur frequently in the languages they observe. They notice one basic distinction that seems to occur universally: the distinction between consonants and vowels. Many linguists prefer to use the terms "contoid" and "vocoid" rather than consonant and vowel in discussing phonetic phenomena, reserving the latter terms for discussion of how such phenomena function in the sound system of a particular language. A contoid is a sound characterized by marked interruption in the airstream, ranging from a complete interruption, as at the beginning of "din" [d], through an incomplete one accompanied by friction, as at the beginning of "zoo" [z], to various kinds of trills, not usually found in English, and resonants, as at the beginning of "red" [r]; a vocoid, on the other hand, is a continuous, therefore uninterrupted, frictionless sound, as in the middle of "bid" [ɪ] and "bed" [ɛ]. Such a distinction between contoid and vocoid seems easy and presents no difficulties in words such as "beat", "king", "pan", and "fish", each of which may be said to consist of three sounds, the middle one of which is a vocoid and the other two contoids: [bit], [kiŋ], [pæn], and [fɪš]. However, the initial sounds of "yet", "wet", "led", and "red" are not so readily or exclusively classifiable as either contoids or vocoids, as we shall see.

CONTOIDS

One of the first activities noticed to recur frequently in languages is activity of the vocal cords, or the lack of such activity. Sounds may be either voiced or voiceless, that is, the vocal cords are either vibrating or not. The initial sounds of each of the following pairs contrast in voicing, the first member of each pair beginning with a voiced contoid and the

second beginning with a voiceless contoid. The appropriate phonetic symbol for the sound is provided in each case:

bin [b] pin [p]
den [d] ten [t]
goal [g] coal [k]
vat [v] fat [f]
zip [z] sip [s]

Place of Articulation

A second kind of distinctive activity is related to the location of any interference that occurs in the vocal tract. We must know whether the interference occurs in the pharyngeal cavity or in the oral cavity, what parts of the cavity are involved, and how these parts are involved. Articulation almost always involves the movement of an articulator toward a point of articulation. In very few cases does articulation involve only an articulator being set in motion, as when either the uvula or the tongue tip is trilled by being made to vibrate very quickly. More generally, in contoid articulations, an articulator is made to touch the back of the pharynx or the top of the mouth at some point. The combination of articulator and point of contact is called the place of articulation. For example, the bottom lip may touch the top teeth to produce labiodental sounds, as at the beginnings of "fat" [f] and "vat" [v]; the tongue tip may touch the gum ridge to produce apicoalveolar sounds, as at the beginnings of "tin" [t] and "din" [d]; the back of the tongue may touch the soft palate to produce dorsovelar sounds, as at the beginnings of "cap" [k] and "gap" [g]; and so on, in a great variety of combinations limited only by anatomic impossibility, for example, the impossibility of the bottom lip touching the soft palate. In each case the articulator is located on the lower jaw, whereas the point of articulation is located on the upper jaw. The place of articulation always specifies the articulator first when both terms seem necessary.

Manner of Articulation

The manner of the articulation is also extremely important. "Ban" and "man" share the same articulator and point of articulation in their initial sounds [b] and [m], for both sounds are bilabial and voiced. However, there must be a further difference between the initial sounds because the words have quite different meanings. The difference is a distinction in the manner of articulation of the initial sounds. In "man" part of the airstream escapes through the nose during the time that the vocal cords are vibrating and the lips are closed. In "ban" the airstream cannot escape through the nose since the velic is closed. The voicing is actually not apparent until the lips are opened when it is immediately apparent in comparison to the initial sound [p] of "pin" in which a noticeable delay in voicing occurs. The basic difference in the manner of articulation of the initial sounds of "man" and "ban" arises from the opening of the velic in the first sound [m] of "man" but its closure in the [b] of "ban".

"Tin", "thin", "shin" are likewise different in the manner of articulation of their initial sounds [t], [θ], and [š]. In "tin" the tip of the tongue completely stops the airstream on the alveolar ridge; in "thin" the airstream is forced through a narrow slit made by the tip of the tongue on the top teeth; and in "shin" the airstream is forced around the edges of the front and tip of the tongue as they are brought into light contact with the alveolar ridge and hard palate. In each case the articulator and point of articulation are quite similar, but the different manners of contact or near-contact produce different kinds of sounds.

The principal manners of articulation are stopping the airstream completely, as in stops, for example the sounds at the beginnings of "toe" [t] and "doe" [d]; interfering noticeably with the airstream as in fricatives, for example the sounds at the beginnings of "Sue" [s] and "zoo" [z]; and making

a closure as for a stop, but allowing the air to be released through the nose, as in nasals, for example the sounds at the beginnings of "map" [m] and "nap" [n]. Other manners of articulation involve the production of different curvatures of the tongue as the airstream passes over it: with laterals the airstream passes over each side of the tongue but not over the center, for example the sound at the beginning of "let" [l]; and with retroflexes the airstream passes over the tongue tip which is curled back, for example the sound at the beginning of "red" [r]. Finally, we can have trills and flaps. Any loose piece of flesh may be trilled, for example the tongue tip or uvula, or there may be just one quick tap or flap, as when the tongue tip is tapped to the gum ridge in the middle of most North American pronunciations of butter to produce a flap [ɾ].

Airflow Direction

A further distinction involves the direction of the airstream: whether it is going into the lungs and is ingressive, or coming from the lungs and is egressive. In nearly all languages sounds are made using egressive air only. Ingressives are rare indeed, in English confined perhaps to certain kinds of exclamatory sounds made in moments of pain, surprise, or tension. Naturally, breathing must go on while speaking occurs, and it is remarkable how breathing patterns change during speaking without the physiologic disruptions normally associated with marked breathing changes, as for example, in hyperventilation.

Tenseness

Finally, the tenseness or laxness of the total vocal apparatus, particularly of the tongue and lower jaw, is important in articulation. A noticeable tensing or tightness is involved in the production of some sounds, whereas others have no such accompanying tenseness and are lax. The initial

sounds in "pit" [p], "fat" [f], and "sip" [s] are tense, whereas the initial sounds of "bit" [b], "vat" [v], and "zip" [z] are lax.

VOCOIDS

In many ways it is much easier to discuss contoid articulation than vocoid articulations. Vocoids are continuous sounds which are not easily located by reference to movements of the tongue, closures or openings of certain passages, types of interruption and friction, and so on. To use a simple illustration, we can fairly easily say certain things about what happens in the mouth at the beginning and ending of a word such as "bit," for there is noticeable lip closure at the beginning and a definite closure behind the teeth at the end. However, the sound in the middle of the word is very much more difficult to describe, and the movements in the mouth are much harder to specify. One solution, of course, would be to devise a set of symbols to represent an arbitrary set of sounds. In this way we could pick out the middle sound of "bit" and represent it as [I] without being concerned with how the sound is actually produced or with how it differs from the middle sounds of "bet," "bat," "boot," and do on. Such a method would hardly be very satifactory, since it would provide no way of indicating the phonetic similarities that exist in such pairs as "bit-bet" and "bit-beat" but do not exist in such pairs as "bit-boat" and "bit-bout". We must, therefore, search for those characteristics, or parameters, which are important in the production of vocoids, just as we searched for suitable parameters for contoids.

Tongue and Lip Position

The basic parameters required to discuss vocoids derive from the positions of the tongue and lips. Basically, vocoids are made by holding the tongue

	Front	Back
High	High front unrounded	High back rounded
Low	Low front unrounded	Low back rounded

Figure 6 Basic Vocoid Parameters in the Oral Cavity.

in certain positions and sending the airstream over it without any kind of interruption or friction. Further modifications may be made, but all such modifications must be associated with a basic tongue position. A simple understanding of the importance of tongue position can be gained through pronouncing "beat" and "bat", followed by "beat" and "boot". In order to pronounce "bat" after "beat" the lower jaw is dropped so that the tongue may be lowered in the mouth. To pronounce "boot" after "beat" the tongue is pulled back. A noticeable rounding of the lips occurs as the vocoid in "boot" is pronounced. This discussion of "beat", "bat", and "boot" introduces the three basic parameters necessary to account for the production of vocoids: the relative height of the tongue, the relative frontness-backness of the tongue, and lip-rounding.

Figure 6 is a schematic drawing of the oral cavity showing these parameters. It accounts for only four basic vocoid positions: high front, low front, high back, and low back. In addition, the front vowels are specified as unrounded and the back vowels as rounded, in accord with what we regard as the normal relationship of roundedness to frontness and backness. If the roundedness distinction is reversed, an additional four vocoids may be accounted for : high front rounded, low front rounded, high back unrounded, and low back unroumded. A high front rounded vocoid occurs in the French word "lune" which may be distinguished from the English words "lean" and "loon," which respectively have a high front unrounded vocoid and a high back rounded vocoid.

STRESS, PITCH & INTONATION

Every language has a rhythm. The rhythm is made up of the stress and intonation given to the spoken words. Stress and intonation are phonemic. You can find minimal pairs where a shift in stress, not in sound, changes the meaning. For example, /pérvert/ and pervért/ and also, /pérmit/ /permít/. Every English utterance has some degree of stress. A one-syllable word, spoken in isolation, has primary stress. Thus, to be complete, the phonemic representation of any one-syllable utterance should include /ˊ/, the symbol for primary stress. However, we have been omitting these stress marks in the transcription of isolated words since no confusion would result from omitting them. In words occuring in sentences, on the other hand, stress (and intonation) becomes an important part of communication. Read this passage from Wardhaugh for more on stress and pitch:

Still other phenomena in the sound stream of speech are of interest of us. Certain vocoids, for example, are uttered with more intensity, or stress, than others, as for example in the different vocoids of the "man" or of "blackboard", or in the vocoids of a more complicated example "a dusty blackboard." Stresses must be defined relative to each other, so the distribution of stress is much less easy to describe than the incidences of occurrence of voiceless bilabial stops. The stress on the first vocoid of "the man" can be described as lighter than the stress on the second vocoid, but reference to an absolute scale is impossible, for we can say the total utterance either quietly or loudly. We can try to record what differences in stress we hear by using various accent marks so that "the man" is recorded as [ðə mǽn] and blackboard as [blǽk-bòrd]. Vocoids may also be uttered with different degrees of pitch. These differences are also relative differences because the basic pitch of voice

is determined by certain characteristics of the speaker's vocal apparatus such as the length and thickness of the membranes in the larynx. It is often important to note the pitch level of the different vocoids, since in some languages pitch differentiates one utterance from another. Thus, an utterance containing a high-pitched vocoid means something quite different from an utterance containing the same vocoid under a mid, low, rising, or falling pitch. Diacritics may also be used to indicate noticeable differences or changes in pitch level.

ASSIGNMENTS:

1. Read pp. 40–64 in Fromkin/Rodman
2. Read pp. 1-17 in Yupik Eskimo Grammar
3. Answer the Questions and Exercises on pp. 83–84 of this manual.
4. Complete four more paragraphs from the Reading Practice on p. 98 of this Manual.
5. Complete 3 pages of transcription from Transcription Practice on pages 99-101 of this manual.

UNIT IV QUESTIONS AND EXERCISES

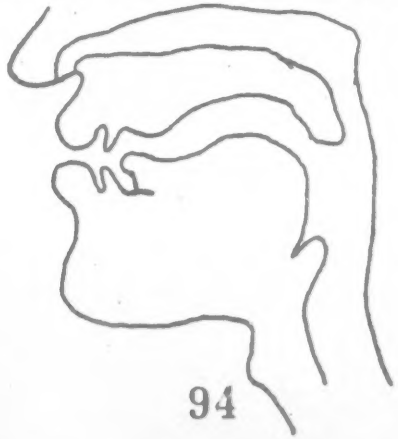
1. Match the English and Yup'ik consonant phonemes with their points of articulation and types of sound (Example /b/: bilabial stop)

Points of articulation: bilabial (labial), labiodental (labial), dental, glottal, alveolar (apical), velar, alveopalatal (apical)

Type of sound: stop, fricative, voiced, lateral, nasal, voiceless

English		English and Yupik	
/p/	_____	/b/	_____
/f/	_____	/v/	_____
/t/	_____	/d/	_____
/θ/	_____	/m/	_____
/ð/	_____	/n/	_____
/z/	_____	/č/	_____
/ʒ/	_____	/ŋ/	_____
/š/	_____	/s/	_____
Yupik Only		/y/	_____
/q/	_____	/k/	_____
/ɬ/	_____	/g/	_____

2. Label the points of articulation on the following figure:



3. a. Mark the primary stress on each of the following words by placing an acute accent (´) over the stressed syllable. Example: lánguage.

1. together	6. digest (noun)-digest (verb)
2. horrible	7. convert (noun)-convert (verb)
3. mystery	8. special
4. mysterious	9. specific
5. phonetic	10. specify

b. Mark the primary stress (as above) and the secondary stress (by a grave accent (`) on the following. Example: fùndaméntal

1. laboratory	6. general
2. medicine	7. generality
3. specialize	8. mystify
4. professorial	9. productivity
5. conversation	10. experience

4. Transcribe these words indicating which syllable gets the stress: (Example: machine/məšíyn/ passion/pǽšən/

ocean_____	azure_____	leisure_____
explosion_____	seizure_____	garage_____
mangage_____	genius_____	congress_____
finger_____	singer_____	kindness_____

UNIT V INTRODUCTION TO MORPHEMES & MORPHOLOGY

We have been talking about the individual minimal units of sound in a language, the phonemes. We will now discuss the minimal units of meaning in a language, the morphemes. A morpheme is an element of speech which conveys meaning. It may be made up of one or more phonemes. It may be the intonation you use. A morpheme combines the expression and the content of a language. One of the ways we identify morphemes is similar to how we identified phonemes: by contrast. For example, look at the following words in Navajo:

shima	my mother
shiyazh	my son
shilah	my brother
shichei	my grandfather

These words have one syllable in common and one in contrast to each other. By contrasting these words, you should determine that the morpheme for "my" is "shi". You could then proceed to determine the morphemes for the other units of meaning in these words. You can do the same kind of analysis in Yupik or English. For example, contrast:

angyaq	one boat	arnaq	one woman
angyak	two boats	arnak	two women
angyat	three (t) boats	arnat	three (t) women

This tells the analyst that -q, -k, and -t refer to differences in <u>number</u>, how many people are doing the action indicated.

You can also use contrast to show that intonation is a morpheme. You can say "Isn't that nice" with various intonations which alter the meaning of what you are saying. "Isn't that nice" with a rising tone at the end indicates

that you actually consider it nice while a sustained tone may indicate sarcasm or actual displeasure. Of course, just as with phonemes, your idiolect or dialect may differ considerably from mine and therefore your particular intonation morphemes may differ.

Some vocabulary words to keep in mind while working on morphemes are:

root: basic morpheme which can stand alone - or to which affixes and other morphemes can be attached.

Example: (verbs) walk, run, talk, see, etc. (nouns) road, house, cat, man, etc.

affix: subsidiary to roots;morpheme attached to root or stem

infix: affix occuring somewhere within the root word - not at beginning or end.

suffix: affix following the root (ex. /-s,/-ed/)

prefix: affix preceding the root (ex. /en-/, /re-/)

stem: morpheme or combination of morphemes to which an affix can be added (only one root)

Example: friends = /frend/is a stem which is also a root
/-z/ is the affix (suffix/

friendships = /frend/ is the root
/frendšip / is the stem (made of root + morpheme)
/-s/ is the affix (suffix)

compound: stems containing two or more roots (example: blackbird, eyeglass,)

blackbirds = /blak bərd/ is the compound stem
/-z/ is the affix (suffix)

stress: emphasis or accent on a vowel or syllable nucleus
primary stress /ˊ/
secondary /ˋ/

open transition: /+/ a pause or a break in sound between utterances

allomorph: a variant of a morpheme which occurs in certain definable environments (Example: /-z/ /-s/ /-iz/ are allomorphs of the same morpheme. They have the same meaning - "plural" - and occur in definable situations: /-iz/ occurs only after grooved fricatives and affricates /szžčǰ/: buses, roses, catches, etc.

/-s/ occurs only after voiceless sounds /ptfkθ/: cups, cats, tacks, etc.

/-z/ occurs only after voiced sounds: /bdvgð/: tags, saws, hides, etc. (and vowels)

Intonation contour: a morpheme made up of two, three, or four pitch phonemes plus one clause terminal, which marks off and holds together every clause. The intonation you use in English communicates meaning, therefore it is considered a morpheme.

Example: "Mother?" /mə́ðər↗/ "Mother!" /mə́ðər↘/

clause: a long utterance characterized by a break at the end and the presence of a /ˈ/.

clause terminal: break marking the end of a clause; the pause between clauses fading /↘/
rising /↗/
sustained /→/

pitch: highness or lowness of tones of speech

/1/ low

/2/ mid (normal speech level)

/3/ high

/4/ extra high

Types of notation to keep in mind:

~ : this means "varies with", "alternates with", "or" as used in /-z ~ -s ~ -iz/

[ ]: these are used in phonetic transcription—pronounciation recorded as heard not including functional differences.

/ /: these are used in phonemic transcription - pronunciation recorded as to include functional differences.

{ }: morphemic representation - one symbol used to represent each morpheme and its allomorphs. Does not give information about pronun-

ciation. Example: -{z} =/-z ~ -s ~ -iz ~ .../

' ': glosses - translations or indications of meaning

* : an impossible, unknown, or incorrect utterance (ex., *" I to go store")

ASSIGNMENT:

1. Read Fromkin/Rodman pp. 101-131 on Morphemes and Morphology.
2. Answer Questions and Exercises on pp. 89-90 of this manual.
3. Complete the last four paragraphs of the Reading Practice exercise on p. 98 of this Manual.
4. Do 2 more pages of transcriptions form pp. 102-103 of this manual.

UNIT V QUESTIONS & EXERCISES

1. Divide these words into their separate morphemes by placing a + between each morpheme.

1. moralizers	7. diachronic	13. strawberry
2. retroactive	8. synchronic	14. irreplaceable
3. inclination	9. totalitarianism	15. replacement
4. befriended	10. experiential	16. stature
5. televise	11. predetermination	17. respectability
6. endearment	12. psycholinguistics	18. introductory

2. Divide these sentences into their separate morphemes by placing a + between each morpheme.

1. The American tourists visited thirteen cities.
2. Our English literature teacher writes his grandmother daily.
3. Linguistics is the scientific study of human language.

3. Give five English idioms and their meanings. Example: kick the bucket, "to die."

4. Give a synonym (perfect or "near") for the following words:

1. appeal	6. teach
2. applaud	7. mate
3. beg	8. fact
4. pal	9. funny
5. behavior	10. scent

5. Look at the following examples from other languages. Determine the morphemes as indicated. KANURI (Nigeria) is done as an example.

	(Adjectives)		(Nouns)	
1	gana	small	nəmgana	smallness
2	kura	big	nəmkura	bigness
3	kurugu	long	nəmkurugu	length
4	karite	excellent	nəmkarite	excellence
5	dibi	bad	nəmdibi	badness

What type of affix is shown? What is its form and approximate meaning?

The affix is a prefix. Its form is /nəm-/ and indicates a noun.

Given /kəǰi/ 'sweet', what is a likely form for 'sweetness'?

Sweetness would be /nəmkəǰi/

Given /nəmŋəla/ 'goodness', what is a likely form for 'good'?

/ŋəla/ would mean good.

GANDA (Uganda)

1	omukazi	woman	abakazi	women
2	omusawo	doctor	abasawo	doctors
3	omusika	heir	abasika	heirs
4	omuwala	girl	abawala	girls
5	omulenzi	boy	abalenzi	boys

What type of affixes are shown? What are their forms and approximate meanings?

Given /abaloŋgo/ 'twins', what is a likely form for 'twin'?

ILOCANO (Philippine Islands)

1	píŋgan	dish	piŋpíŋgan	dishes
2	tálon	field	taltálon	fields
3	dálan	road	daldálan	roads
4	bíag	life	bibíag	lives
5	muáŋ	buffalo	mumuáŋ	buffaloes
6	úlo	head	ululúlo	heads

What type of affix is used to form the plural?

Describe its form and relationship to the stem. Be sure to make clear exactly how much is involved.

Given /múla/ 'plant', what would be the most likely form meaning 'plants'?

Given /tawtáwa/ 'windows', what would be the most likely form meaning 'window'?

UNIT VI LANGUAGE ANALYSIS

In this unit we will practice the methods of analysis you have already learned and apply them to various languages. Your major project for this unit and for the class is to compile a report and analysis of some aspect of Yupik. You should use the Yupik Grammar and Orthography books as resources, as well as your own knowledge of the language. You may pattern your report after the exercises we will do in this unit about other languages. The following exercises are taken from Gleason, Workbook in Descriptive Linguistics. You should work through these in class as a group, but you may wish to preview them on your own.

In the following problems you are to identify the affixes. The data will, in most cases, be arranged in columns to facilitate your work. Compare the words within each column. Also compare words in the same line from column to column. For example:

MENDE (Sierra Leone)

1	pɛ́lɛ́	house	pɛ́lɛ́í	the house
2	mɛmɛ̀	glass	mɛmɛ̀í	the glass
3	dòmí	story	dòmíí	the story
4	kɛ́lì	hoe	kɛ́lìí	the hoe
5	hɛ́lɛ́	elephant	hɛ́lɛ́í	the elephant
6	kɔ̀mɔ̀	teacher	kɔ̀mɔ̀í	the teacher
7	nàvɔ́	boy	nàvɔ́í	the boy
8	múmí	person	múmíí	the person

If you will look down the columns, you will find that all the words in the second column are alike in ending with /-í/. There is no such feature in which all the words in the first column are alike. Moreover, each pair of words, /pɛ́lɛ́ : pɛ́lɛ́í/ for example, differ solely in the presence of the /-í/ in the second. We may accordingly answer questions of the sort found with these problems in the following way:

What type of affix is shown? A suffix.

What is its form and approximate meaning? /-í/ 'the'

Given /sáló/ 'proverb', what is a likely meaning for /sálóí/?
'the proverb'

Given /kpíndíí/ 'the night', what is a likely form for 'night'?
/kpíndí/

Note: The question asks for "approximate meaning". If we were to examine a series of whole sentences in Mende, we would find that sometimes /pɛ́lɛ́/ might occur where the English translation would use 'the house', or /pɛ́lɛ́í/ where the translation would use 'a house'. Glosses can never give a very exact idea of meanings. Such a gloss as 'the' is particularly unreliable, since the use of 'the' is so much determined by English grammar (rather than semantics). So also, Mende /-í/ will be determined by Mende grammar. The two cannot be expected to be equivalent in any precise way.

Note also: The question asks for "a likely form" or "a likely meaning". Until you become well acquainted with a language, it is not safe to be dogmatic about matters of this sort. There are always idiomatic expressions which don't mean exactly what you might expect, and irregular formations which don't follow the rules you might at first formulate. You can only guess at questions like these. It is perfectly legitimate to guess, provided you do not take your guesses to seriously. If you were in the field you would check with an informant. As you gather experience you can be more confident. The final question, however, is always "What actually occurs in the speech of native speakers?" not "What would my grammatical formulations lead me to create?"

KURDISH (Near East)

1	aaqil	wise	aaqilii	forethought
2	diz	a robber	dizii	robbery
3	draiž	long	draižii	length
4	zaanaa	wise	zaanaaii	erudition
5	garm	warm	garmii	warmth

What type of affix is shown? What is its form and approximate meaning?

Note the two words glossed alike. Can you comment?

Given /raas/ 'true', what is a likely meaning for /raasii/?

1	atanipenda	he will like me	15	atanipiga	he will beat me
2	atakupenda	he will like you	16	atakupiga	he will beat you
3	atampenda	he will like him	17	atampiga	he will beat him
4	atatupenda	he will like us	18	ananipiga	he is beating me
5	atawapenda	he will like them	19	anakupiga	he is beating you
6	nitakupenda	I will like you	20	anampiga	he is beating him
7	nitampenda	I will like him	21	amenipiga	he has beaten me
8	nitawapenda	I will like them	22	amekupiga	he has beaten you
9	utanipenda	you will like me	23	amempiga	he has beaten him
10	utampenda	you will like him	24	alinipiga	he beat me
11	tutampenda	we will like him	25	alikupiga	he beat you
12	watampenda	they will like him	26	alimpiga	he beat him
13	atakusumbua	he will annoy you	27	wametulipa	they have paid us
14	unamsumbua	you are annoying him	28	tulikulipa	we paid you

Note: The forms glossed 'he' could as well be glossed 'she'. The forms glossed 'you' are all singular. The plural 'you' is omitted from this problem because of a minor complication.

Give the morphemes associated with each of the following meanings:

subjects:	I	objects:	me
	you		you
	he		him
	we		us
	they		them
tenses:	future	stems:	like
	present		beat
	perfect		annoy
	past		pay

What is the order of the morphemes in a word?

Supply the probable forms for the following meanings:

I have beaten them	you have beaten us
they are beating me	we beat them
they have annoyed me	I am paying him

Supply the probable meanings for the following forms:

atanilipa	walikupenda
utawapiga	nimemsumbua

TEPEHUA (Mexico)

laqatam	one	laqakaawt'utu	thirteen
laqat'uy	two	laqap'ušam	twenty
laqat'utu	three	laqap'ušamtam	twenty-one
laqat'aat'ii	four	laqap'ušamkaaw	thirty
laqakiis	five	laqap'ušamkaawt'uy	thirty-two
laqakaaw	ten	laqap'ušamkaawmahaaš	thirty-nine
laqakaawtam	eleven	laqat'aat'iikiisp'ušam	four hundred
laqakaawt'uy	twelve	laqakiiskiisp'ušam	five hundred

These forms are used with certain nouns only:

laqatam	kawayuh	one horse	laqatam	šanta	one flower

Other nouns require different forms:

'aqšt'uy	'alnikii	two pieces of paper	'aqšt'aat'ii	šaapumh	four pieces of soap
qankaaw	k'iw	ten trees	qankiis	maka'	five fingers

List the morphemes:

Prefixes associated with noun classes

.....

.....

.....

The meanings of these cannot be determined without much more data.

Morphemes for numerical values (Give both form and meaning.)

.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

What would you expect for the following:

nine .....

twenty-five .....

thirty-four .....

three hundred .....

What is the significance in the order of the morphemes?

BONTOC (Philippine Islands)

1	fikas	strong	fumikas	he is becoming strong
2	kilad	red	kumilad	he is becoming red
3	bato	stone	bumato	he is becoming stone
4	fusul	enemy	fumusul	he is becoming an enemy

What type of affix is used to form the verbs?

Describe its form and relationship to the stem.

Given /pusi/ 'poor', what would be the most likely meaning of /pumusi/?

Given /ŋitad/ 'dark', what would be the most likely form meaning 'he is becoming dark'?

Given /pumukaw/ 'he is becoming white', what is the most likely form meaning 'white'?

SAMOAN (The Pacific)

1	manao	(he) wishes	manamao	(they) wish
2	matua	(he) is old	matutua	(they) are old
3	malosi	(he) is strong	malolosi	(they) are strong
4	punou	(he) bends	punonou	(they) bend
5	savali	(he) travels	savavali	(they) travel
6	pese	(he) sings	pepese	(they) sing
7	laga	(he) weaves	lalaga	(they) weave
8	atamaʼi	(he) is wise	atamamaʼi	(they) are wise

What type of affix is used to make the form of the verb used with a plural subject?

Describe its form and relationship to the stem.

Given /galue/ '(he) works', what would be the most likely form with a plural subject?

Given /alolofa/ '(they) love', what would be the most likely form with a singular subject?

TAGALOG (Philippine Islands)

1	sumulat	write!	16	ʾumaral	teach!
2	sumulat	wrote	17	ʾumaral	taught
3	susulat	will write	18	ʾaʾaral	will teach
4	sumusulat	is writing	19	ʾumaʾaral	is teaching
5	sulatin	be written!	20	ʾaralin	be taught!
6	sinulat	was written	21	ʾinaral	was taught
7	susulatin	will be written	22	ʾaʾaralin	will be taught
8	sinusulat	is being written	23	ʾinaʾaral	is being taught
9	hahanap	will look for	24	ʾumibig	love!
10	hanapin	be sought!	25	ʾumibig	loved
11	hinahanap	is being sought	26	ʾumiʾibig	is loving
12	hinanap	was sought	27	ʾiʾibig	will love
13	bumabasa	reads	28	ginawaʾ	was done
14	bumasag	broke	29	lumapit	approach!
15	dumatiŋ	arrived	30	tinawag	was called

List the roots:

.....	write	.....	teach
.....	look for	.....	love
.....	read	.....	do
.....	break	.....	approach
.....	arrive	.....	call

List the affixes:

Active: commands.....

past.....

future.....

present..... and .....

Passive: commands.....

past.....

future..... and .....

present..... and .....

Supply the forms you would expect for the following meanings:

.....	call!	.....	is calling
.....	approached	.....	will arrive
.....	will be sought	.....	is called
.....	be done!	.....	was read

ASSIGNMENTS:

1. Do the rest of the transcriptions in the Manual.
2. Compile an analysis report of Yupik. Apply the things you've learned to your native language or choose another. This should be 4-5 pages long and may include:
   lists of phonemes and minimal pairs
   transcriptions of words, phrases, stories
   word analysis (morphemes/affixes)
   articulation charts
   a particular facet of Yupik(for example the numbering system)
3. FINAL EXAM
4. Supplemental Reading: Read pp. 136-168 of Fromkin/Rodman

READING PRACTICE

The following may be used for reading practice to familiarize yourself with English in phonemic transcription. Some features of spoken English to be described in Chapter 4 are not marked, so that it is necessary to use the conventional written word divisions and conventional punctuation. Neither of these properly belongs in a representation of spoken English.

ðə stiyd bit ɨz mɛstər,
haw keym ðɨs tə pɛwsɨ
hiy hərd ðə gud pɛstər
kray, ənd fleš ɨz grɛwɨs.

ðər wɔntɨ wəz ə fišər nɛymd fišər
huw fišt fər ə fiš ɨn ə fišər,
  bət ðə fiš wɨð ə grin
  puld ðə fišərmɨn in;
naw ðeyr fišiŋ ðə fišər fər fišər.

bətiy hɛd ə bit əv bitər bɛtər
hwič meyd ər bɛtər bitər.
šiy gat ə bit əv bɛtər bɛtər
ən meyd ər bitər bɛtər bɛtər.

ə fliy ən ə flay ɨn ə fluw
wər imprizɨnd, sow hwət kud ðey duwɨ
  sɛd ðə flay "let əs fliy",
  sɛd ðə fliy "let əs flay",
sow ðey fluw θruw ə flowɨn ðə fluw.

sɛd ə greyt kangrɨgeyšɨnɨl priyčər
tuw ə hɛn "yuwr ə byutɨfəl kriyčər"
  ən ðə hɛn, pliyzd ət čɛt
  leyd ən eg ɨn ɨz hɛt,
ən ðɛs dɨd ðə hɛn riywɔrd biyčər.

ðər wəz ə yəŋ fele neymd howl
huw fel in ðə spriŋ in ðə fowl.
  twɔd əv bin ə sɛd θiŋ
  if iyd dayd ɨn ðə spriŋ,
bət iy dɨdɨnt, hiy dayd ɨn ðə fowl.

ðə reyn it reynɨθ an ðə ǰɛst
ən onlɛow ən ðə enǰɛst felə.
bət čiyfliy ən ðə ǰɛst, bikɔz
ðə enǰɛst stiylz ðə ǰɛsts ɛmbrelə.

ɛz ə byutiy ay ɛm nat ə stawr,
ðər ər sɔðərz mowr hɛnsɛm bay fawr,
  bət may feys, ay dont maynd ɨt,
  fər ay ɛm bɨhaynd ɨt;
its ðə piypɨl ɨn frənt get ðə ǰawr

flow wɔz fand əv ebɨniyzər,
eb fər šɔrt šiy kowld ər bow.
tonk əv taydz əv lɛv, greyt siyzər!
yuw šud siy ɛm, eb ən flow.

hiwrz tə ðə čiger čɨts nat eniy bigər
čɨn ðə hɛd əv ə veriy smɔl pin,
  bət ðə lɛmp čɨt iy reyzɨz
  ičɨz layk bleyzɨz,
ən čɛts wər ðə reb kɛmz in.

ðər wəz ən owld mɛn əv tarɛntɛm,
huw nweyšt ɨz fowlts tiyθ tɨl iy bent ɛm.
  hwɨn ðey sɛt ɨm ðə kownt
  əv wet iy sɛd lownt,
hiy rɨplayd "ay kownt sey fər ay rent ɛm"

ðər wəz ən owld mɛn uw sepowzd
ðət ðə striyt dowr wəz parɨšliy klowzd;
  bət sɛm veriy lawrǰ rɛts
  eyt ɨz kowts ən ɨz hɛts,
hweyl ðə fyutɨl owld ǰentɨlmɛn dowzd.

TRANSCRIPTION

rioh	ridge	sham	jam	gem
bush	mush	knot	myth	gap
his	hiss	hung	box	zest
things	that	dumb	book	Scotch
buff	guess	witch	which	should
thank	vex	shook	Butch	cup
debt	ring	wring	latch	lath
could	top	this	them	thumb
jug	yes	give	zinc	hod

peas	peace	prize	price	loud
ice	eyes	raise	race	shout
lose	loose	choose	coat	code
root	rude	mate	made	though
pined	pint	down	bound	through
sight	sighed	place	daze	throw
do	due	dew	freeze	cheese
east	eazed	roast	posed	don't
loaf	healed	knifed	wheezed	boned

TRANSCRIPTION

cheer	jeer	sheer	there	chair
car	star	score	pure	poor
sir	fur	her	oar	floor
cork	fork	hoarse	horse	course
thwart	queered	hard	heart	barm
George	forge	pearl	first	mare
more	tour	wore	war	feared
air	sharp	shirt	bird	barred
bared	beard	harsh	hearth	scorned

TRANSCRIPTION

bave	balve	egg	legs	bag
fog	frog	log	oil	use
bat	bad	batb	bathe	strengtbs
sixtbs	watob	wasb	cents	sense
psalm	palm	whole	cough	broil
breathe	breatb	breadtb	clotbs	clothes
worse	pass	razz	noise	voice
asks	smasb	bad	sad	bumps
as	jazz	coy	prints	prince

TRANSCRIPTION

machine	passion	ocean	explosion
azure	seizure	leisure	delicious
intrusion	enthusiasm	adjourn	zephyr
manage	garage	camouflage	language
mystic	genius	congress	unceasing
emergence	extinguish	signpost	kindness
fatherless	anxious	finger	singer
paragoric	slowness	abnormality	legalistic
likelihood	rediscovery	irresponsible	unprofessorial

TRANSCRIPTION

Have the baker recheck that bakery check.

It's all so funny. It's also funny.

Her beau tried to kiss her on the boat ride.

The hot-rod tore up the street. The paving

contractor tore up the street.

You may walk on the rocks, but I think the

trail's better. You may go by bus if you

want to, but I think that rail's better.

In the draught Miss Trayne missed rain.

Tommy. Tommy. Answer me. Tommy.

Did you call me, Mother? What do you want?

You heard me. What are you doing?

Nothing.

Well, stop it this instant. Do you hear?

Aw, Ma, can't a guy do anything around here?

Don't argue. Come here. I need you.

What do you want me for? Do I have to?

I said come here. I meant right now.

How much are the apples?

Three for a quarter. They're real nice.

Give me three pounds. Got any grapefruit?

Sorry, they're scarce right now. What about

some oranges? Or a nice fresh pineapple?

They're too much trouble; I'll eat 'em out of

a can. How are your bananas?

Couldn't be better. How many do you want?

Half a dozen. But not those bruised ones.

LINGUISTICS 101 - COLLIER

FINAL EXAM

I. Write the lower and upper articulator.

	Lower	Upper
example Alveopalatal	front of tongue	far back of palate
a. Dental		
b. Glottal		
c. Bilabial		
d. Velar		
e. Alveolar		

II. Transcribe these words:

a. Jump_____ h. Might_____

b. House_____ i. Though_____

c. Bathe_____ j. Choose_____

d. Breath_____ k. That_____

e. Kiss_____ l. Knit_____

f. Love_____ m. Box_____

g. Cheese_____ n. Book_____

Transcribe these sentences:

a. Hurry up! I don't want to miss the movie!

b. Please darling! I'm so sorry. Won't you forgive me?

III. Fill in the charts with English Phonemes:

CONSONANTS

	Bilabial	labio-dental	dental	alveolar	alveo-palatal	velar	glottal
Stops							
Affricates							
Fricatives slit							
groove							
Resonants Lateral							
Nasals							
Semi-vowels							

VOWELS

	Front	Central	Lower
High			
Mid			
Low			

IV. Fill in the charts with Yupik phonemes:

CONSONANTS

	Bilabial	labio-dental	dental	alveolar	alveo-palatal	velar	glottal
Stops							
Affricates							
Fricatives slit							
groove							
Resonants Lateral							
Nasals							
Semi-vowels							

VOWELS

	Front	Central	Lower
High			
Mid			
Low			

V. Morpheme Analysis

a. Describe the affixes

1. Swahili

mtoto	child	watoto	children
mtu	person	watu	people
mpisi	cook	wapisi	cooks
mgeni	stranger	wageni	strangers
mswahili	swahili man	waswahili	swahili men

type of affix: describe the forms and approximate meanings:

2. Bontoc

fikas	strong	fumikas	he is becoming strong
kilad	red	kumilad	he is becoming red
bato	stone	bumato	he is becoming stone
fusul	enemy	fumusul	he is becoming (an) enemy

type of affix:
describe the form and approximate meaning:
describe its relationship to the stem:

given/pust/ "poor" what would/pumusi/mean?_____

given /nitad/ "dark" what would be the form meaning "he is becoming dark"_____

given /pumukaw/ "he is becoming white" what is the form meaning "white"_____

b. Describe these morphemes in Navajo:

dii ch'ah 'at'e	this is (a) hat
dii ke 'at'e	this is (a) shoe
'ei ke 'at'e	that is (a) shoe
dii ɬizi 'at'e	this is (a) goat
'ei dibe 'at'e	that is (a) sheep
dii chidi ɬichii'	this is (a) red car
dii hooghan ɬichii'	this is (a) red house
'ei dibe ɬikizh	that is (a) spotted sheep
dii dibe ɬigai	this is (a) white sheep
diish dibe ɬigai	Is this a white sheep?
diish ch'ah ɬichii'	Is this (a) red hat?
'eish ch'ah ɬichii'	Is that (a) red hat?
'eish ch'ah ɬiba	Is that (a) gray hat?
diish dibe ɬizhin	Is this (a) black sheep?

Give the morphemes for each meaning:

this_____goat_____sheep_____car_____house_____

is_____that_____hat_____red_____shoe_____

black_____gray_____spotted_____white_____

What type of affix is /ɬi-/? What is its meaning?
What type of affix is /-sh/? What is its meaning?

What can you conclude about " 'ate'" when you contrast all of these sentences?_____

What is the morpheme indicating a question?_____

What is the morpheme indicating a color?_____

GLOSSARY

ACCENT: 1) A synonym for stress. (See STRESS.) 2) Marks indicating the four word, phrase or sentence stresses: ˈ(primary); ˌ (secondary); ˗(tertiary); ∪ (weak). 3) A written mark over certain vowels of a word to differentiate it from another word spelled in the same way-Italian: e (and); è(is). 4) A written mark indicating syllabic stress-Spanish: está(he is) ésta (this one). 5) A written mark indicating vowel quality-French: père (father); allé (gone). 6) A "foreign" accent-a pronunciation deviation in the target language which identifies or marks the speaker as non-native. 7) Regional or dialectal accents.

ACHIEVEMENT TEST: One which measures how much of a body of language material taught has actually been learned by the student.

ACTION SERIES (also called the Gouin Series from the name of its originator): Utterances which verbalize a series of sequential actions being performed; e.g., I'm getting up; I'm going to the board; I'm writing my name; etc.

ACTIVATED HEADPHONES: Those which amplify a speaker's voice and permit him to hear himself as he speaks.

ACTIVE VOCABULARY: The content and function words of a language which are learned so thoroughly that they can be used in the performance of any communication act; the vocabulary which can be easily recalled for production. (See PASSIVE KNOWLEDGE.)

ALLOPHONE: One of the variant sounds of a phoneme. For example, the different p sounds in pill, spill, cup are all variants, or allophones of the phoneme /p/. Allophones do not differentiate meaning.

ANALOGY: The ability to form a word or pattern on the basis of knowledge of similar words or patterns. For example, if your students know the forms boy/boys; girl/girls; ruler/rulers they should by analogy be able to give the form pencils when you give the stimulus word pencil.

ANOMIE: A traumatic feeling experienced by learners who no longer identify with the native language community who are not yet ready to "belong" to the English-speaking community.

ANTHROPOLOGY: One of the social sciences which studies all the features of the culture (including language) of a society.

ARTICULATION: 1) The smooth, continuous development from one level of language learning to the next. 2) The production of distinct sounds by the vocal organs-e.g.,tongue between the teeth or tip of tongue against the tooth ridge.

AUDIO-LINGUAL: 1) A term used to indicated an approach to language learning-first by hearing, then by repeating. 2) Listening and speaking. (Another term for audio-lingual is aural-oral.)

COGNITIVE CODE THEORY: One which holds that 1) the learner perceives (or is guided to discover) the "rule" or generalization underlying a feature of language from several examples of it; 2) language is rule-governed behavior.

COLLOCATION: The co-occurences (of sounds, structures, or lexical items) permitted by the language system.

COMMUNICATIVE COMPETENCE: The ability to recognize and to produce authentic and appropriate language correctly and fluently in any social situation.

COMPETENCE: 1) In a psycholinguistic sense, the achieved ability of the speaker or listener to understand and produce language utterances. 2) In transformational theory, the ability to recognize well-formed sentences; deviant (non-grammatical) sentences; "look-alike" sentences which come from different deep structures; and synonymous sentences having different surface structures. (See PERFORMANCE.)

COMPOUND SYSTEM: One in which the foreign language is learned and used in relation to the native language. (See COORDINATE SYSTEM.)

CONFIRMATION: Knowledge given a learner-orally or through some other technique-that his response is correct.

CONFLICT: Interference or problem in learning a second or foreign language caused by the ingrained habit of saying something in a certain way in one's native tongue.

CONNOTATIVE: The personal meaning of a word may have for individuals depending on their experiences with the word or its referent.

CONSCIOUS SELECTION: The step in the learning process in which students choose between two language items which are in contrast. (See p. 55.)

CONSOLE: The teacher's control center in a language laboratory.

CONSTITUENT: Any one of the smaller structural units linked together in a larger construction. For example in The boys bought balls, the boys (the NP or Noun Phrase) and bought balls (the VP or Verb Phrase) are the immediate constituents of the sentence. The ultimate constituents would be boy/s and ball/s which cannot be divided further.

CONSTITUENT THEORY: The binary division of an utterance into smaller and smaller constituents until ultimate constituents are identified. (These may be segments of words.) (See p. 8 and above.)

CONTENT WORDS: Vocabulary items that refer to things, actions, or qualities.

CURRICULUM: The knowledge, information, skills, abilities, activities, materials, etc. which are included in the teaching of any subject.

DECODE: The process by which a hearer derives the total meaning (linguistic and cultural) of a verbal message. (See ENCODE.)

DEDUCTIVE PROCESS: One in which a rule is formulated first and then followed by examples which conform to it. (See INDUCTIVE PROCESS.)

DENOTATIVE: The dictionary meaning of a word. (See CONNOTATIVE.)

DERIVED: An utterance, word, or expression produced by the application of a transformation rule to a basic word or utterance; e.g., kindness is derived from kind; Hamlet was written by Shakespeare is derived from Shakespeare wrote Hamlet.

DETERMINER: A word such as an article, a possessive adjective, a partitive, which marks a noun; e.g., the, a, some, each, any.

DIAGNOSTIC TEST: One which permits the examiner to judge the student's strengths or weaknesses, problems or difficulties.

DIALECT: A variety of the national language used by members of a speech community living in a given geographical area.

DIPHTHONG: A sound which combines two vowel sounds; e.g., JI/, /AU/.

DISTRACTOR: An incorrect item given purposely by the examiner in a test.

ENCLODE: The process through which a speaker conveys his thought by means of a verbal message; to put thought into linguistic form. (See DECODE.)

ENVIRONMENT: 1) The surrounding sounds, syllables, or words of any element of language. 2) The surrounding community.

EQUIVALENT: A word, expression, utterance, or sentence in one language which is not a word-for-word translation of a word, etc. in another language but which conveys the same meaning.

EVALUATION: Tests (oral, written, short answer, essay, etc.) and other measures such as observation and/or questionnaires to ascertain results being achieved, and progress being made toward objectives of language learning.

FADE: 1) In teaching, the gradual withdrawal of cues so that the student is required to produce utterances on his own. 2) In speech, the lowered volume at the end of an utterance.

FEEDBACK; the control of one's performance derived from the awareness of its effects; e.g., the speaker controls his flow of speech by hearing his own words, or by listening to or noting the reaction of others.

FIT: The relationship between the sounds of the oral language and the writing systems which represent it.

FORMAL: Pertaining to the arrangement of sounds, letters, or words in an utterance.

FORMULA: A fixed expression of greeting, thanks, agreement, etc, such as Thank you, How do you do which native speakersuse habitually in communication.

FORMULATE: Verbalize; put into words.

FRAME: 1) In programmed instruction, a minimal unit of instruction. 2) A syntactic pattern, each slot of which would always contain words of the same class (determiner, noun, verb, etc.)

FUNCTION: The grammatical role of an item or structure; e.g., subject, object.

FUNCTIONAL: Pertaining to real use; communicative.

FUNCTION WORDS: Words which have little or no meaning by themselves but which are used in utterances to signal grammatical relationships (e.g., auxiliaries and prepositions). With content words, they constitute the vocabulary or lexicon of a language.

GENERALIZATION: The verbalized "rule" or description of a language item which results from the learner's perception of its recurring, consistent sound, form, position, function, and meaning.

GENERATE: 1) In gerative-transformational grammar, to list the rules which account for the existence of all the acceptable (well-formed) sentences in the language. 2) To create or produce.

HABIT: A permanent ability to act in a particular manner.

IDIOLECT: The way the individual uses the language of the community; his "parole."

IDIOM: An expression whose total meaning cannot be derived from the meaning of each individual word within it; e.g., I can't do without you.

IMMEDIATE CONSTITUENTS: Two or more units on one level of structure which form a single unit on the next higher level; e.g., The subject and predicate are IC's of the sentence; the verb phrase and complement are IC's of the predicate.

INCREMENTAL LEARNING: Learning in small steps.

INDUCTIVE PROCESS: One in which a series of examples or model sentences are given in order to enable the learner to formulate a generalization, description, or "rule." (See DEDUCTIVE PROCESS.)

INFLECTION: A change in the form of a word to indicate plurality, possession, etc.

INFORMANT: A native speaker or one with near native ability who may be used as an authentic resource person with relation to his language or culture.

INTEGRATION: 1) The process of combining related material or elements which belong together. 2) The fusion of different elements into a coherent whole. 3) In discussing indivuduals, one speaks of a well-adjusted, or well-integrated, personality.

INTERACTION: The give and take of communication.

INTERCHANGE: A conversation of two or more utterances.

INTERFERENCE: A difficulty or problem in the learning of one habit because of the existence in the learner of a conflicting one; e.g., the difficulty of learning to produce a sound in the target language because it does not exist or exists in another position in the learner's native tongue.

INTERNALIZE: To understand and learn material so thoroughly that it can be produced at will.

INTERVOCALIC: Between two vowels.

JACK: A box or other piece of equipment for a tape recorder to which additional headphones can be attached.

JUNCTURE: A change in the quality of sounds and in the meaning of an utterance produced by pauses in speech; e.g., nitrate/night rate; I scream/ice cream.

KERNEL SENTENCE: A basic sentence in a language-usually simple, active, and without modifiers-which can undergo many transformations based on a series of rules. A kernel sentence has two parts or two constituents; a noun phrase (NP) and a verb phrase (VP). ("Base" sentence is being used more frequently.)

KINESICS: The study of the non-berbal motions used in communication; e.g., gestures, facial expressions.

LANGUAGE FEELING: (SprachgefUhl) The intuitive awareness, resulting from intensive practice in the foreign language, enabling the learner to recognize and to control his production of well-formed sentences.

LANGUE: The total language system-the code-of the community as compared to an individual's expression (his "parole"). Both terms "langue" and "parole," originated with Ferdinand De Saussure, a Swiss linguist.

LEARNING: The process which leads to the acquisition of any form of behavior.

LEVEL: 1) The height to which the voice rises or falls in speaking. In English, for example, we distinguish four pitch levels. 2) The stage of learning-beginning, intermediate, advanced. 3) The degree of achievement toward a goal.

LEXICAL COMBINATION: Words which co-occur; e.g., part of.

LEXICON: The words or vocabulary of the language.

LINGUISTICS: A science which systematically analyzes and describes a language as it is used by its native speakers. There are several branches of linguistic science; e.g., historical, comparative, contrastive, psycholinguistics, sociolinguistics.

MACHINE TRANSLATION: The equivalent of a text in one language rendered in another language by means of a computer.

MARKER: A word or morpheme that helps identify the function of another word; e.g.,'s added to a singular noun indicates possession; the before a word identifies it as a nominal.

MASTER: 1) (verb) to learn thoroughly. 2) (noun) an original recording from which copies can be made.

METALINGUISTICS: 1) The scientific study of linguistics and its relation to other cultural factors in a society. Paralinguistics, kinesics, proxemics, for example, are included in metalinguistics. 2) The study of the language used to talk about language.

MIM-MEM: Mimicry-memorization. A teaching technique in which students imitate a model and then repeat it to the point of memorization.

MINIMAL PAIR: Two words that sound alike except for one phonemic difference; e.g., bag/back; ship/sheep; bit/pit.

MODEL: 1) The perfect or near-perfect production of a sound, word, or utterance given by the teacher or a recording for imitation by the learners. 2) A tentative or hypothetical design or explanation for any phenomenon.

MONITOR: To listen to students through any inter-communication device as they record.

MONOSTRUCTURAL APPROACH: A teaching method in which individual structures are presented one at a time through several examples and not in a dialogue or reading passage.

MORPHEME: The smallest meaningful unit of language. It may be "free" (a word such as girl which can stand alone) or "bound" (the s of girls which indicates plurality but which cannot stand alone).

MORPHOLOGY: The study of the changes in forms of words produced by inflection or derivation.

MORPHOPHONEMICS: The study of the relationships and changes in phonemes because of their environment or position within a word (a morpheme) or before another word; e.g., in English, the plural morpheme changes its sound depending on the final letter

of the word (/z/ in boys but /s/ in books and Iz/ in boxes.

MULTIPLE CHOICE TEST: One in which the student is asked to select an answer to a question or problem from among several choices given.

OPERANT CONDITIONING: The shaping (reinforcing or extinguishing) of the learner's responses through the forging of a bond between stimulus and response and confirmation of the correct response (termed "reward").

PARADIGM: A complete systematic set of the forms of a word or of a verb conjugation; e.g., English: I, me, my, mine; Spanish: present of the verb hablar (to speak): hablo, hablas, habla, etc.

PARALINGUISTICS: The study of tone of voice, tempo of voice, groans, sighs, and other non-articulated sounds which convey meaning to a listener.

PAROLE: The individual speaker's use of language to convey messages.

PASSIVE KNOWLEDGE: that which is needed for understanding or recognition only; "receptive" knowledge as opposed to "active."

PATTERN: 1) An arrangement of sounds or words which recurs systematically and is meaningful. 2) The basic design that underlies a sentence.

PATTERN PRACTIVE: Drills and activities in which the patterns of a language are learned to the point where students can repeat, alter, or respond to them habitually and fluently.

PAUSE: Another word for JUNCTURE.

PEER TEACHING: Two or more students helping each other to learn by practicing and engaging in communication activities with each other.

PERFORMANCE (in Generative-Transformational Theory): 1) The overt verbal behavior of a speaker. 2) An instance of a speaker's competence.

PERFORMANCE OBJECTIVE: The degree of learning of an item or a skill which a student is expected to achieve under certain well-defined, clearly specified conditions.

PERSONALIZATION: Relating dialogues, readings, etc. to the learners' lives and experiential background through questions.

PHATIC FUNCTION OF LANGUAGE: The ability of a speaker to start, interrupt, or discontinue a conversation.

PHONEMICS: The systematic study of the meaningful sounds of language.

PHONETICS: The study of the sounds of speech-the phonemes and the allophones-and the way they are produced, transmitted, and received by the listener.

PHONOTACTICS: The arrangement of sounds in a language; the study of the restrictions (inappropriate combinations) or arrangements of sounds.

PHRASE STRUCTURE RULE: One which governs the construction of the two basic parts of utterances: the noun phrase)NP) and the verb phrase (VP) of kernel (or base) sentences.

PITCH: A voice tone which distinguishes meaning.

PRAGMATICS: The study of the correlation of linguistic forms to situational settings.

PROFICIENCY TEST: One which permits the measurement of a person's knowledge and ability in a foreign language without regard to formal study or text used.

PROGNOSTIC TEST: One which permits the making of hypotheses about a person's possible success in language study. Synonym = APTITUDE TEST.

PROGRAMMED LEARNING: The systematic grading and sequencing of language material and its presentation in the smallest possible segments, generally in frames. The material to be learned (the program) is generally placed in a "teaching machine" or in a text. Since this is often used without an instructor, the device or text directs the student to proceed to the next step when his response has been correct; to go back to a previous step or engage in related drills if the response has been incorrect. It is generally self-pacing; that is, a student can work at his own speed.

PROMPT: To whisper a word or expression to the learner in order to help him produce an utterance.

PROP: A real object (a flag, a flower, a piece of bread) or any device used in teaching to simulate reality and to elicit student response.

PROXEMICS: The study of distances maintained by speakers of different languages as they speak to each other or to others.

PSYCHOLINGUISTICS: The scientific study of the relationships between linguistic data and psychological processes.

RECOMBINE: To bring together familiar sentences, dialogues, or reading passages in order to create new lialogues, etc. in which all the elements are familiar to the learners.

REDUNDANCY: The multiple clues in language, some of which could be eliminated without loss of essential information; e.g., in The boys are wearing their coats, the /z/ sound, the verb are, the posses-

sive their, and the /s/ sound in coats all indicate plurality.

REENTRY: The systematic reuse or reintroduction of words and structures which have been learned with newly acquired language items (in dialogues, readings, etc.) in order to 1) keep them alive in the learners' minds, and 2) demonstrate that a word or pattern can be used in many different situations.

REFERENT: The actual object or situation in the real world to which a word is related or to which it refers.

REGISTER: The variation in language (in pronunciation, grammar, or vocabulary) as used by persons in different jobs or professions, in different situations (formal or informal) and in different modes (speaking or writing).

REINFORCEMENT: 1) The consolidation or further learning of material. 2) The confirmation or reward which increases the likelihood of a student's giving a correct response again at another time.

REJOINDER: An emphatic response given to a statement or question. The rejoinder may be a formula, another question, or another statement which reiterates or emphasizes the initial utterance.

RELIABILITY: The degree to which a test is consistent in measuring what it is supposed to measure.

RHETORIC: The method and study of the organization of syntactic units into larger patterns.

RHYTHM: The regularity of speech sequences.

RULE: 1) The description of the form, function, and position of a recurring systematic feature of language. 2) In transformation theory, the instructions or directions which account for the existence of kernel (base) sentences (Phrase Structure Rules) and derived sentences (Transformation Rules).

SEGMENT: A syllable of a word or a group of words in an utterance.

SEGMENTAL PHONEMES: The vowels and consonants.

SEMANTICS: The study of word meanings and their effect on communication, interaction, and interpersonal relationships.

SEMIOTICS: The study of the exchange of any messages whatsoever and of the signs which underlie them.

SHAPE: To lead the learner grafually to a closer approximation of the desired terminal behavior through successive listening and speaking experiences.

SIGN: The general term which designates anything which stands for or represents something else.

SYNTAX: The arrangement of words in utterances and sentences.

SYSTEM: Sets of recurring combinations and sequences of sounds and words into patterns which signal meaning.

TAGMEME: 1) The slot and its filler. 2) A significant unit os syntax.

TARGET LANGUAGE: The foreign language that is being learned.

TAXONOMIC: Pertaining to the description and classification of structures of language.

TEACHING MACHINE: A mechanical device used in some forms of programmed instruction (See p.115).

TENSE: The formal categories of verb inflections; e.g., in English, we speak of the simple present and past tenses only: walks; walked.

TERMINAL BEHAVIOR: The desired outcome that a learner should achieve in terms of the acquisition of some habit, skill, knowledge, or attitude.

TERMINAL CONTOUR: The intonation patterns at the end of an utterance. In English, for example, there are three: rising, falling, ans sustained.

TRACK: 1) A pattern of subject or course organization in a school or school system. For example, in the first year of the secondary school, there may be two language tracks, one for students who have studied English in the elementary school and one for beginners. 2) A stretch or path along a tape on which a recording can be made.

TRANSFER: The ability to use knowledge about a feature of one's native language or of the target language in learning another related feature. (Negative transfer implies the making of false analogies.) (See p. 14).

TRANSFER RULES (in General Transformational Theory): These consist of two parts: 1) The phrase structure that base sentences must have before transfer rules can be applied. 2) The operation or sequence of operations producing a new sentence.

TRANSFORMATION THEORY: A theory of language analysis which assumes 1) that all utterances, the surface structure of the language, are derived from basic sentences-the deep structure of the language-by a series of rules; 2) that all native speakers have competence in recognizing well-formed sentences but cannot necessarily produce them; 3) that language is creative and stimulus-free. (See the Bibliography, p.195, for further study.)

UNCONSCIOUS SELECTION: The habitual, fluent use of the correct sound, word form, or word arrangement in "free" communication.

USAGE: The selection by a speaker of a certain language variety or register.

UTTERANCE: A word, a fixed expression, or a sentence said by a speaker which has meaning, and before which and after which there is silence on his part.

VALIDITY: The degree to which a test measures what it is supposed to measure.

VARIATION: 1) A change of some kind. 2) In audio-lingual methodology, the asking of questions on the dialogue itself.

VARIETY OF LANGUAGE: Changes (phonological, syntactic, or lexical) within the code brought about by such factors as geography (in the case of dialects), social or professional role, situation (formal or informal), and mode (oral or written).

VERBAL BEHAVIOR: 1) Language. 2) Any manifestation of self-expression and/or communication.

VOICED SOUND: A sound made with the vocal cords vibrating; e.g., /b/, vowels.

VOICELESS SOUND: A sound made while the vocal cords are not vibrating; e.g., /p/.